

**Pipeline of plenty to address global paucity.** Supply constraints in the global market for large-diameter linepipes are unlikely to abate over CY2007-09, a good omen for Indian pipe makers. Increasing sales in US and Middle-East, along with domestic demand, are likely to drive significant volumes (14% CAGR) for our universe of pipe companies over the next five years. We find PSL and Jindal Saw the most attractive due to their significant scope for improving capacity utilizations and low debt leverage at high points of the cycle.

### Prefer Jindal Saw (JSAW) and PSL to Welspun Gujarat (Welspun)

We use DCF to value these companies and apply a 12.5% WACC and 1-1.5% terminal growth rate. We prefer PSL and JSAW due to their large underutilized capacities and low leverage even as the cycle nears its peak. We find it hard to justify the valuations of Welspun despite our strong projected capacity utilization and its unmatched EBITDA margins. We believe the market may be ignoring the risks to earnings for Welspun from likely large domestic plate capacity additions and its large Rs18 bn debt at end-FY2009E.

### Demand to remain high for the next 3-5 years

We believe North America is set to lead demand for large-diameter linepipes through the next couple of years, with Asia a close second. We estimate global demand of 74 mn tons for large-diameter linepipes over CY2007-12, translating to a value of US\$81 bn over the same period (see Exhibit 14). However, large demand from Russia, China, and to an extent Europe, will likely be met through their domestic capacities. We believe CY2009 could see the peak of the current cycle in large-diameter linepipe prices.

### Supply likely to stay low; India to capitalize on opportunity

We expect global supply for LSAW and HSAW pipes to remain tight, especially in the North American region in the next couple of years, as most global producers report strong capacity bookings over CY2007-2008. The increasing acceptance of spiral for onshore applications in the US, Middle-East and India is driving volume growth for Indian players, which have large available spiral capacities. We expect HSAW volumes for these players to increase at a CAGR of 29% over FY2007-10E.

### Key risk: Faster-than-expected supply increase

Faster-than-expected addition of linepipe capacities could weaken the pricing advantage for the Indian linepipe players. We note that around 5 mn tons of linepipe capacity is planned to be added over next three years (see Exhibit 29).

#### Recommendation summary

	Rating	Target Price (Rs)		Upside (%)	52-week High/low	Market Cap (Rs bn) (1)	EV/EBITDA (x)		P/E (x)	
		1-Aug-07	1-Aug-07				2008E	2009E	2008E	2009E
Jindal SAW (2)	OP	790	672	17.6	728 / 250	37.6	6.0	4.0	10.0	6.6
PSL	OP	420	333	26.2	402 / 182	13.8	8.4	5.9	13.2	8.1
Welspun Gujarat (3)	U	210	234	(10.1)	264 / 62	43.7	10.3	7.2	15.7	13.2

Notes:

(1) Market cap based on fully diluted no. of shares

(2) Fiscal year ending September

(3) Face value Rs5

Source: Bloomberg, Kotak Institutional Equities estimates

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The prices in this report are based on the market close of August 1, 2007.

## Financial and valuation overview

Exhibit 1: Comparative valuations of linepipe manufacturers

	2006	2007E	2008E	2009E	2010E
<b>EV/EBITDA (X)</b>					
PSL	11.3	12.0	8.4	5.9	4.3
JSAW	10.8	8.0	6.0	4.0	3.2
Welspun	17.2	14.0	10.3	7.2	5.4
<b>P/E (X)</b>					
PSL	23.6	20.2	13.2	8.1	5.7
JSAW	22.8	14.0	10.0	6.6	5.7
Welspun	40.2	27.3	15.7	13.2	10.3
<b>EV/EBIT (X)</b>					
PSL	12.8	13.5	9.7	6.6	4.8
JSAW	11.9	9.0	6.7	4.4	3.5
Welspun	20.6	16.2	11.3	8.3	6.5
<b>P/B (X)</b>					
PSL	3.8	3.0	2.1	1.7	1.4
JSAW	3.5	2.3	1.9	1.4	1.2
Welspun	5.5	4.5	2.7	2.2	1.8

Note:

September fiscal-year ending for Jindal Saw; March fiscal-year ending for PSL,Welspun.

Source: Company, Kotak Institutional Equities estimates.

Exhibit 2: Comparative financials of linepipe manufacturers

	2006	2007E	2008E	2009E	2010E
<b>Revenue (Rs bn)</b>					
PSL	14.5	14.8	20.0	28.1	36.1
JSAW	38.7	49.6	61.1	81.9	91.0
Welspun	18.3	26.8	36.8	44.5	56.7
<b>EBITDA margin (%)</b>					
PSL	10.9	10.5	11.3	11.8	11.9
JSAW	10.5	12.0	12.7	13.0	12.8
Welspun	10.8	12.4	16.3	18.8	17.8
<b>PAT (Rs bn)</b>					
PSL	0.5	0.7	1.0	1.7	2.4
JSAW	1.7	2.8	3.9	5.8	6.7
Welspun	0.6	1.4	2.8	3.3	4.3
<b>RoACE (%)</b>					
PSL	11.4	10.3	12.6	15.0	18.0
JSAW	10.2	12.6	15.2	19.9	19.8
Welspun	11.6	10.3	12.3	12.8	14.6
<b>RoAE (%)</b>					
PSL	22.6	20.8	20.5	23.9	27.1
JSAW	15.3	18.8	21.0	25.1	22.9
Welspun	19.1	22.0	24.4	18.8	19.2

Note:

September fiscal-year ending for Jindal Saw; March fiscal-year ending for PSL,Welspun.

Source: Company, Kotak Institutional Equities estimates.

## Valuation: Prefer DCF-based valuation over earning-based

We prefer a DCF-based valuation over earnings-based valuation as we believe DCF captures the highly probable continuous long-term spending on linepipe infrastructure globally. However, we model prices to peak in CY2009 and soften from CY2010. We note that though large order books provide robust near-term visibility, large investment plans offer strong volume growth visibility over the next five years. However, the pricing advantage of current players could weaken post CY2008-2009 with the roll out of the large announced capacity additions globally (see Exhibit 29). We assume a drop in realizations and capacity utilizations beyond FY2010 and FY2011, respectively. At our target valuations, our universe of linepipe companies will likely trade at 5X-6.9X FY2009E EBITDA.

### DCF captures long-term demand and high working capital needs

We prefer a DCF-based valuation over earnings-based valuation as we believe DCF captures the highly probable continuous long-term spending on linepipe infrastructure globally and the high working capital requirement of this business. Exhibit 3 shows our DCF-based valuation of our universe of companies using a 12.5% WACC and 1.0-1.5% growth in perpetuity. We model JSAW and Welspun to grow at 1.5% in perpetuity due to their wider product mix versus PSL, which has a single product (HSAW pipes).

Exhibit 3: DCF-based target values for our universe of linepipe companies

	PSL	JSAW	Welspun
Target price - 1 year forward	420	790	210
Current price (Rs)	333	672	234
Upside (%)	26.2	17.6	(10.1)
<b>Assumptions</b>			
WACC (%)	12.5	12.5	12.5
Growth rate (%) - post 2017	1.0	1.5	1.5
Remarks	Growth expected to be low due to single product	Higher growth due to seamless and DI	Higher growth due to plate mill

Source: Bloomberg, Kotak Institutional Equities estimates.

### High long-term demand for linepipes

We believe there is a strong possibility that demand for large-diameter linepipes can continue to remain buoyant for a significantly longer-term post 2012 on account of several factors (a) increasing E&P activity (for offshore applications and transportation), (b) larger greenfield projects in Asia, Europe and Africa, (c) replacement and refurbishment of old pipelines in US and Russia, and (d) increasing reliance on the imported oil & gas. According to International Energy Agency (IEA) and Metal Bulletin Research (MBR) estimates, we could see demand for linepipes grow at 2% post 2012 as oil and gas production continue to remain strong—the demand holding up despite (1) USA completing much of its planned bulk projects and (2) India and China capex slowing down. We model linepipe revenues of our universe of companies to grow strongly over the next three years before seeing a marginal decline or flat growth, after which we again expect growth in perpetuity of 1-1.5% (see Exhibit 4).

**Exhibit 4: Demand growth to remain strong over the next three years and then slowdown**  
Pipe revenue CAGR for various periods (%)

	2007-10	2010-12	2012-17
PSL	34.6	4.1	(1.0)
JSAW	22.0	0.7	(2.1)
Welspun	21.7	(0.7)	(1.1)

Source: Company data, Kotak Institutional Equities estimates.

### Big appetite for working capital

We note that the linepipe manufacturing industry has high working capital needs, mainly on account of the large transit period for its raw material and outbound finished goods along with the storage of the raw material—coils and plates for the execution of the acquired orders. We note that with the increasing volumes from their international locations, there will be marginal improvement in the net working capital for our universe of linepipe companies (see Exhibit 5).

**Exhibit 5: Linepipe manufacturing requires large investment in working capital**  
Change in working capital (Rs mn)

	2006	2007	2008	2009	2010
JSAW	(2,231)	(1,823)	(1,230)	(2,337)	(1,671)
PSL	(1,267)	(62)	(1,128)	(1,880)	(1,691)
Welspun	(1,076)	(1,934)	(3,413)	(1,829)	(354)

Note:

September fiscal-year ending for Jindal Saw; March fiscal-year ending for PSL, Welspun.

Source: Company data, Kotak Institutional Equities estimates..

### Target valuations imply reasonable FY2009E EV/EBITDA multiples

We find FY2009E EV/EBITDA multiples for our target valuation to be reasonable considering the decline in prices we expect post CY2009 and stagnating/dropping capacity utilizations post 2011. We believe capacity additions in CY2008 and CY2009 will ease the tight supply-demand balance towards end-CY2009, putting pressure on prices.

**Exhibit 6: Target valuations imply reasonable FY2009E EV/EBITDA multiples**  
Target FY2009E EV/EBITDA multiples

	JSAW	PSL	Welspun
Target price (Rs/share)	790.0	420.0	210.0
Fully diluted market cap (Rs bn)	44.2	17.4	39.2
Net debt (Rs bn)	9.1	5.3	18.3
EV (Rs bn)	53.3	22.7	57.5
EBITDA FY2009E (Rs bn)	10.7	3.3	8.4
EV/EBITDA (X)	5.0	6.8	6.9

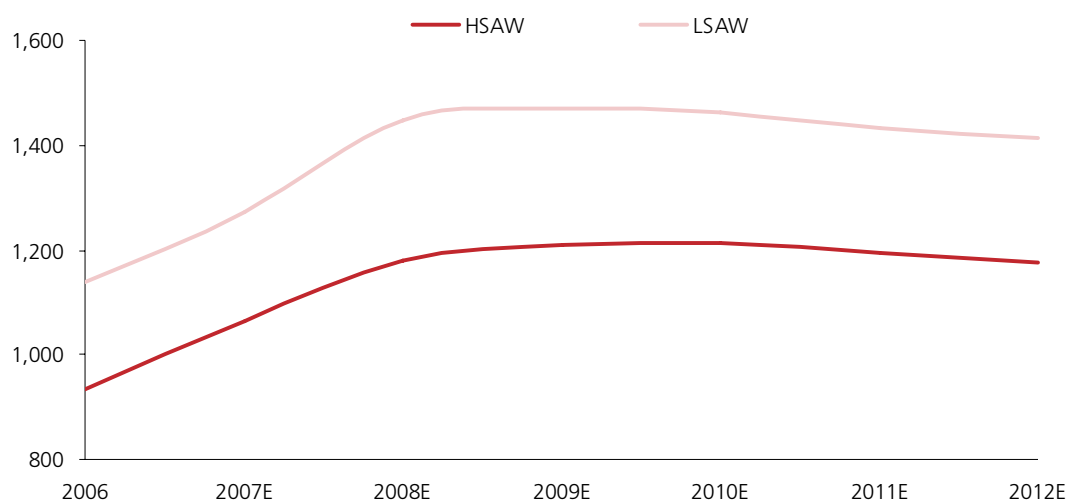
Source: Company data, Kotak Institutional Equities estimates.

### We model a drop in linepipe realizations post CY2009

We expect strong prices in CY2008 and to some extent in CY2009. This is based on our expectation that the supply-demand balance will remain tight till CY2009 as we expect around 2.5 mn tons of further large-diameter linepipe capacity to come online by CY2008-end. We note that demand worldwide for large-diameter linepipes has been very strong over the past few years, given the large oil and gas infrastructure build-up in Europe (mainly Russia), China and USA. Asia (ex-China) is also picking up with India and Middle East building large infrastructure. Importantly, with the further addition of capacities and reducing imbalance in supply-demand, we estimate linepipe realizations to drop by 2-5% in CY2010. We build in an annual price decline of 1% and 1.3% in HSAW and LSAW, respectively, over FY2009-12E (see Exhibit 7).

#### Exhibit 7: Pipe realisations to peak out in CY2009 and then drop steadily

Average HSAW, LSAW pipe realization for our universe of companies, 2006-2012E (US\$/ton)



Source: Kotak Institutional Equities estimates.

### Large order books provide strong near-term visibility

Large order books for our universe of companies provide a strong near-term visibility for volumes, revenues, margins and earnings growth. Our universe of companies has a total order book of Rs116 bn (US\$2.9 bn) to be executed over next 12-15 months (see Exhibit 8).

#### Exhibit 8: Large order books provide a strong near-term visibility

Current order book and order book as %age of last 12 month revenue

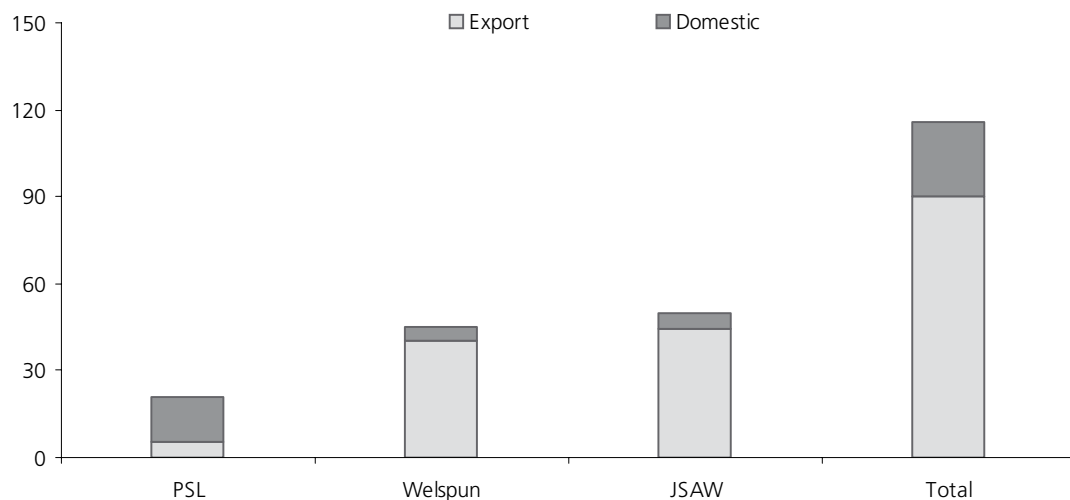
	Current order book		Last 12-month sales	% of last 12-month sales
	(Rs bn)	(US\$ bn)	(Rs bn)	
PSL	21.0	0.5	16.2	130
Welspun	45.0	1.1	29.5	153
JSAW	49.6	1.2	48.7	102
<b>Total</b>	<b>115.6</b>	<b>2.9</b>	<b>94.4</b>	<b>122</b>

Source: Company data.

We note that these order books are large due to the global demand-supply imbalance for linepipes and increasing acceptability of Indian products. Barring PSL, we find that export orders constitute a significant part of the current outstanding order books (see Exhibit 9).

**Exhibit 9: Order books skewed towards exports**

Current order book break-up (Rs bn)



Source: Company data.

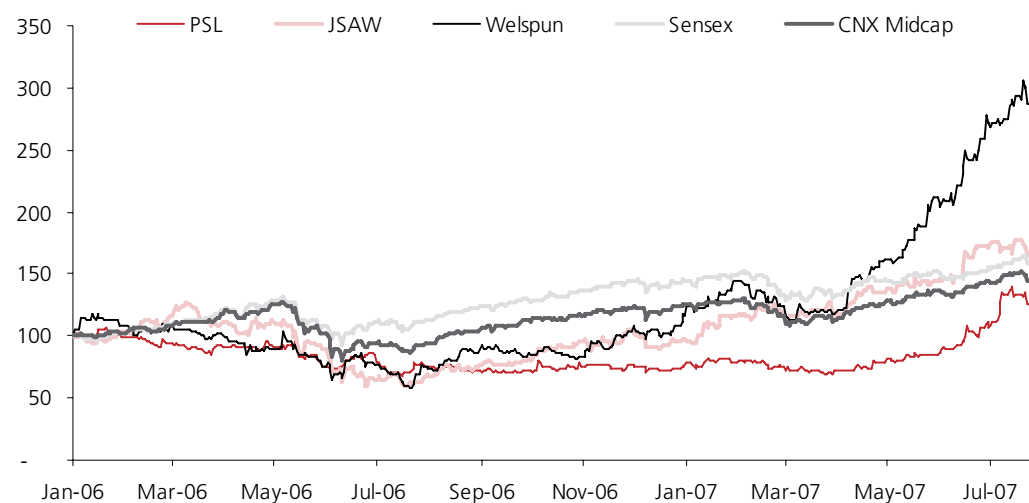
### Prefer PSL and JSAW over Welspun

We prefer PSL and JSAW due to their large underutilized capacities and low debt leverage at the impending highs of the current cycle. We find it hard to justify the valuations of Welspun despite our strong projected capacity utilization and unmatched EBITDA margins. We believe the market may be ignoring the risks to earnings for Welspun from the likely domestic plate capacity additions and its large Rs18 bn debt at end-FY2009.

### Relative valuations for Welspun appear stretched

**Exhibit 10: Relative stock price performance**

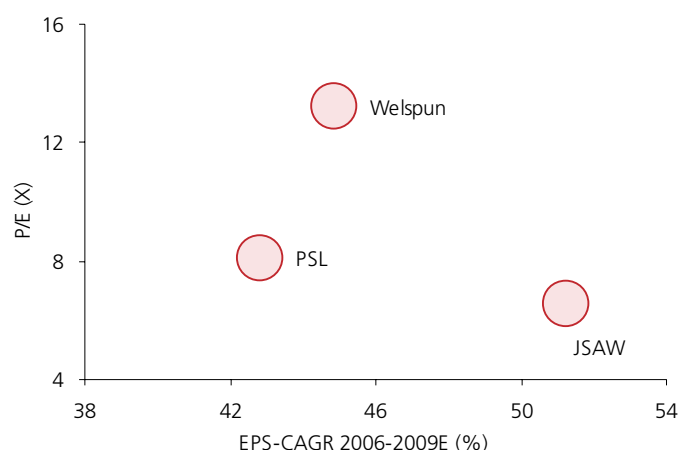
Indexed stock performance since 2006, rebased to 100



Source: Bloomberg, Kotak Institutional Equities.

Exhibit 11: Welspun valued at the highest P/E despite lower EPS growth

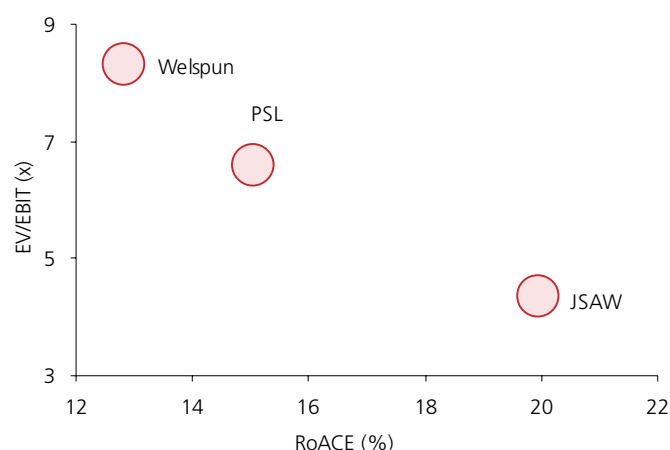
EPS - CAGR 06-09E (%) and P/E 2009E (X)



Source: Kotak Institutional Equities estimates.

Exhibit 12: Welspun valued at the highest EV/EBIT despite lowest RoACE

RoACE (X) vs EV/EBIT (X), fiscal year-ends, 2009E



Source: Kotak Institutional Equities estimates.

### Jindal Saw—comprehensive pipe solutions

JSAW is a diversified pipe producer present in all the major pipe segments—LSAW, HSAW, Seamless and Ductile Iron. We believe diversification will bring in growth and benefits of all segments. We expect increasing capacity utilizations and ongoing expansions to drive volumes and process-related investments to drive margins over FY2006-09E. We expect revenues and net earnings to grow at a CAGR of 28.4% and 51.8%, respectively, over FY2006-09E. We initiate coverage with an Outperform rating and target price of Rs790.

### PSL—ready to ride the tide

We believe PSL is well placed to make the most from the increasing transition towards HSAW pipes due to (1) increasing acceptance of HSAW by the global user industry for onshore applications, (2) HSAW's cost competitiveness and (3) limited availability of raw material for LSAW. PSL is the leader in domestic spiral pipe market (60% domestic capacity share) and is now present in the Middle East with a 75,000 MT capacity in UAE. We expect volumes and revenues to increase at a CAGR of 40% and 34.6% over FY2007-10E, respectively. We expect EBITDA and earnings to grow at a CAGR of 40.2% and 54.4%, respectively, over FY2007-10E. We initiate coverage with an Outperform rating and target price of Rs420.

### Welspun Gujarat—impressive, but possibly less rewarding

We find Welspun's order book and EBITDA margins to be the best of the lot. Nevertheless, we find it hard to justify its valuations despite our strong projected capacity utilization and increasing EBITDA margins supported by the backward integration into plates. We believe the market may be ignoring the risks to earnings emanating from the likely domestic plate capacity additions and large leverage on its balance sheet at the impending highs of the cycle. We expect revenues and net earnings to grow at a CAGR of 28.4% and 44.1%, respectively, over FY2007-10E. We initiate coverage on Welspun with an Underperform rating and a target price of Rs210.



## Relative valuations with other players in the pipes and steel space

Exhibit 13 compares the key valuation parameters of our universe of linepipe companies with some other linepipe, OCTG pipes and steel companies.

Exhibit 13: Key valuation parameters of our universe of linepipe companies with other players

	Share price (local currency)	Market Cap (US\$ bn)	P/E(X)		EV/EBITDA (X)	
			FY1	FY2	FY1	FY2
Corinth	6	1.1	16.6	11.4	13.0	11.0
Ipsco	167	7.4	13.3	12.1	6.9	6.4
Tenaris	17	28.2	9.6	12.8	11.2	9.8
Sumitomo	675	27.4	15.1	14.8	9.5	9.1
Salzgitter	147	12.7	11.6	12.5	5.1	5.6
Severstal	17	17.2	9.9	11.8	5.8	5.7
Jindal Saw	672	0.9	10.0	6.6	6.0	4.0
PSL	333	0.3	13.2	8.1	8.4	5.9
Welspun	234	1.1	15.7	13.2	10.3	7.2
Maharashtra Seamless	592	1.0	13.2	12.1	7.7	6.6

Source: Bloomberg, Kotak Institutional Equities estimates for Indian companies.

## Demand: Worldwide and strong

We believe North America is set to lead demand for large-diameter linepipes through the next couple of years, but Asia will also be close behind. We estimate global demand of 74 mn tons for large-diameter linepipes over CY2007-2011 translating to a value of US\$81 bn over these five years (see Exhibit 14). However, the large demand in Russia, China and, to an extent, Europe, will be met through their domestic capacities and European and Japanese imports. We believe North America and the Middle East will see large increases in linepipe imports as supply remains tight in these regions. We believe CY2009 could see the peak of large-diameter linepipe prices, post which prices could soften in CY2010.

### Linepipe demand to flow from increasing energy infrastructure spend

The ever-increasing need for energy resources and the high oil prices have led to a renewed effort for the search of new sources of oil and gas. With oil prices skyrocketing, old E&P projects, which were earlier unviable are also being examined for new sources of oil and gas leading to a steep growth in the demand for steel pipes—Oil Country Tubular Goods (OCTG) and linepipes. We expect this upsurge in the E&P activities and the growing demand for energy transportation to continue in the medium term, leading to high demand growth for linepipes. Moreover, we believe increasing reliance of OECD economies on imported oil & gas will drive large investments for pipeline infrastructure in these geographies.

### North America set to lead the near-term demand

We believe that North America (USA & Canada) is set to lead the charge for large-diameter linepipes through the next couple of years. Simdex data suggests that nearly 23% of the total demand over CY2007-2011 is set to emerge from pipeline projects in North America (see exhibit 14). We believe the shortage of linepipe capacities in this geography over the next couple of years will increase the linepipe imports into USA at a much faster pace. Industry sources suggest that current capacity of US is not more than two-thirds of its current demand, thus raising the need for imports till new capacities become operational.

Exhibit 14: Asia and North America are the major demand regions for linepipes  
Global linepipe demand over the next 3-5 years

Region	No. of Projects	Total length		Equivalent tons (a)	Total investments (b)
		(Km)	(%)	(mn tons)	(US\$ mn)
Asia	90	81,736	33%	24.5	26,973
North America	189	57,920	23%	17.4	19,114
Latin America	39	34,278	14%	10.3	11,312
Europe	62	33,822	14%	10.1	11,161
Middle East	92	21,541	9%	6.5	7,109
Africa	28	11,610	5%	3.5	3,831
Australasia	11	5,566	2%	1.7	1,837
<b>Total</b>	<b>511</b>	<b>246,473</b>	<b>100%</b>	<b>73.9</b>	<b>81,336</b>

Notes:

(a) Equivalent pipe tonnage are Kotak estimates based on thumbrule of 300 ton/km.

(b) Total investments are Kotak estimates based on US\$1,100/ton of pipes.

Source: Simdex, Kotak Institutional Equities estimates.

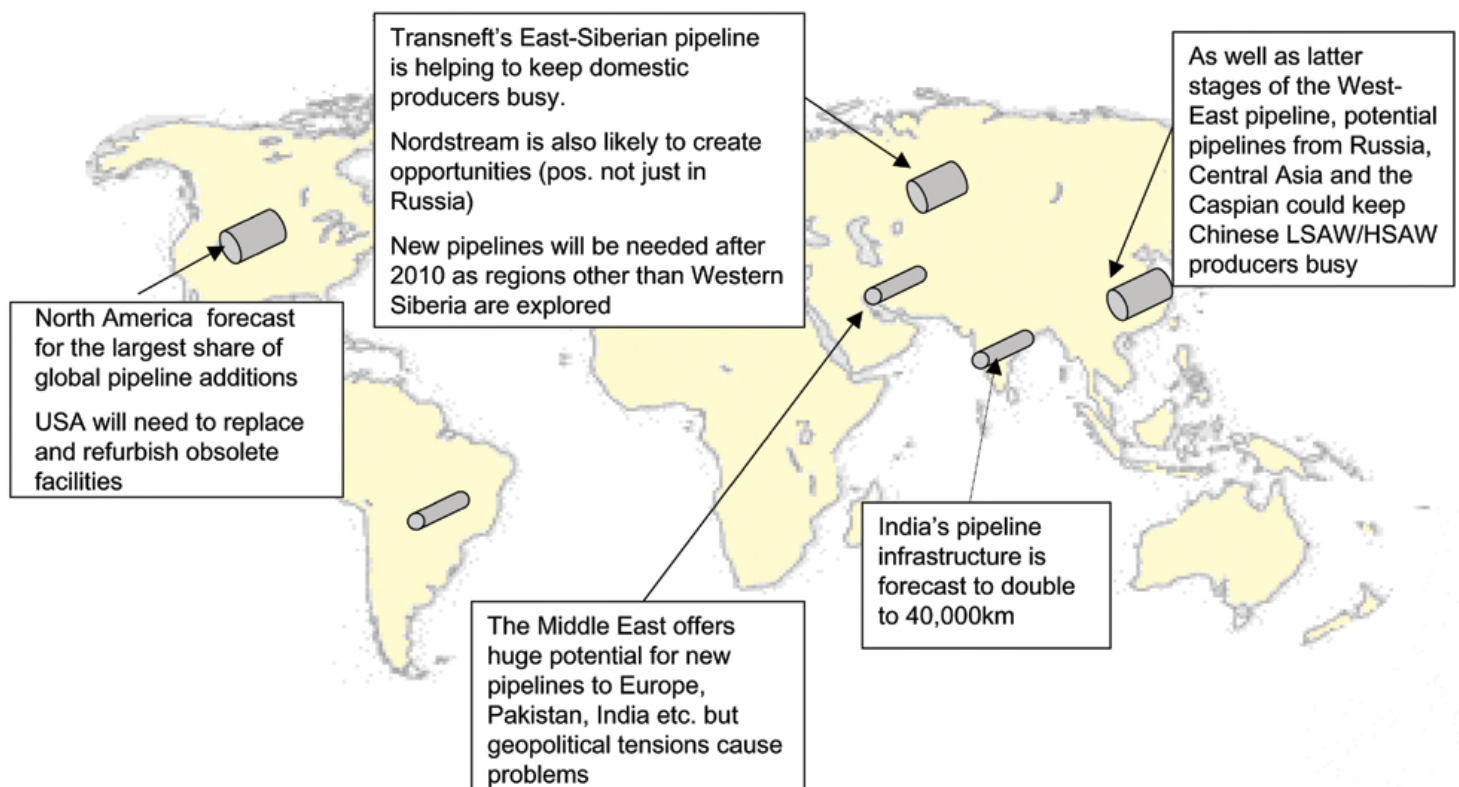
We believe exports to North America will be one of the biggest volume drivers for Indian companies. Moreover, to exploit large volume demand over the next 5-10 years, Indian companies are setting up linepipe production capacities in the US. There is a likelihood that demand for linepipes can continue much longer as the country explores many new large projects to increase its natural gas production and connecting to oil sands.

Energy Information Administration (EIA) projects that new natural gas pipelines will be built from supply regions in the West to meet natural gas demand in the East, including the US\$24 bn Alaska Gas pipeline to bring gas from North Slope through Canada to the US. Industry also anticipates the development of the new pipelines in Alberta to meet increased production from oil sands and to access northern frontier natural gas reserves.

### Asia takes the lead in planned projects; expect strong growth

EIA projects the world energy demand to increase over 50% by 2030 and global oil consumption to grow by 1.6% a year with Chinese and Indian needs playing an increasing role. This is why the Asian region holds promise as a hot spot for future pipeline activity. We believe though Asia currently has the largest share in the planned pipeline projects globally (see exhibit 14), the demand may not be the highest over CY2007 and CY2008. We believe China leads Asia in terms of planned projects and future demand as it extensively expands its cross-country pipeline network.

Exhibit 15: North America to lead linepipe demand; Russia and Asia close behind



Source: Hatch Beddows.

### Middle East—another large player within Asia

We believe increase in refining capacities and investments in gas infrastructure will drive demand for linepipes from the Middle Eastern region. The Middle East accounts for 9% of the planned pipeline projects globally (see Exhibit 14). We note that energy companies in the region are flush with funds from high oil prices and are planning large refining capacity increases. Presently, refining capacity in the Middle East is about 25% of its total crude production. We expect this to generate large import demand for linepipes into the Middle East as capacities there continue to be short of the demand for linepipes. We foresee this to be a large market for Indian players. PSL has already set up a 75,000 ton plant in UAE and we expect the company to address the increasing demand from this geography and post better margins than its Indian capacities.

### Export opportunity

Indian companies do not have easy access to high growth markets like Europe, Russia, China and Japan. In Europe and Japan, there is significant local capacity, which makes it difficult for Indian manufacturers to transport their pipes from domestic facilities. Russia and China are closed markets with very little international trade. Thus, the Middle East, North America and Africa remain the main international markets for Indian linepipe manufacturers.

## Domestic demand: Backyard bonanza, but slow to grow

We expect the domestic demand for pipes to rise substantially with the increasing Oil & Gas Exploration & Production (E&P) activity and creation of large cross-country infrastructure for energy (mainly gas) transportation. We believe the large gas network of 9,062 km announced by domestic oil & gas majors will make gas the main driver of linepipes in the country over the next few years. Apart from the oil & gas sector, we believe demand from planned water distribution network could also be another large opportunity. We note that US\$4 bn worth of water projects are currently under various stages of planning, design and construction in the country. We estimate an annual demand of 2,500-3,000 km of linepipe demand in the country over the next five years.

## India—pipeline penetration bound to increase

We expect the proportion of pipeline usage for oil and gas transportation in India to improve significantly from its current level of 25% (59% in USA; 75% in France). E&P activity in India is on an upswing in search of newer sources of energy to reduce import dependence. Further new gas discoveries will require transportation through cross country pipelines by gas majors. We expect domestic pipeline infrastructure to double over the next 3-5 years. We note that oil & gas companies have already announced plans for adding around 19,450 km of pipelines to the existing network of 21,098 km (see exhibit 16).

**Exhibit 16: Pipeline infrastructure in India to double in next 3-5 years**

Existing and proposed oil and gas pipelines in India (km)

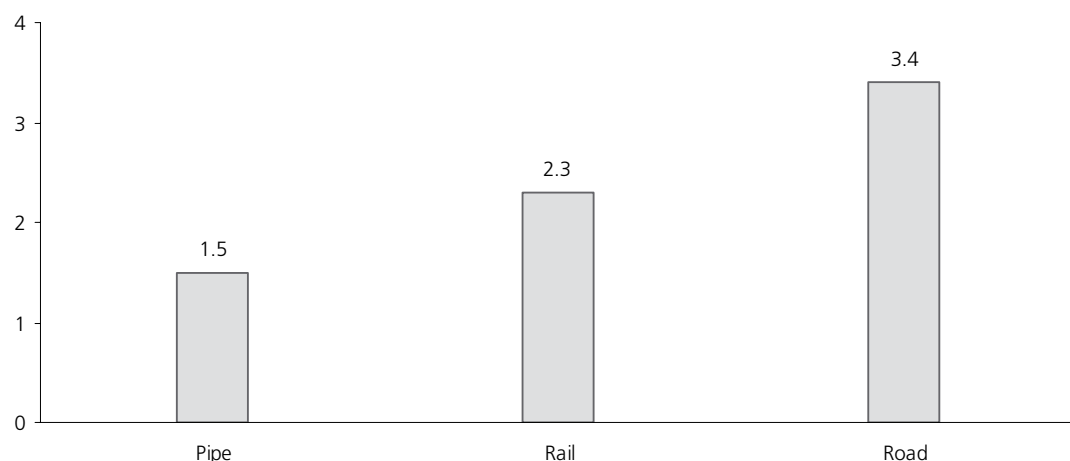
	Existing	Proposed	Total
Crude & products	13,795	10,388	24,183
Gas	7,303	9,062	16,365
<b>Total</b>	<b>21,098</b>	<b>19,450</b>	<b>40,548</b>

Source: Company, Infraline, compiled by Kotak Institutional Equities.

We believe 'cost effectiveness with greater security' will be the key driver of the increase in pipeline infrastructure in the country. Pipe transportation costs approximately 65% and 45% of railway and roadway costs, respectively (see Exhibit 17), and offers stability and security for oil and gas transportation. Pipelines are preferred over other modes as there is more transit safety for the products and low chances of pilferage. Moreover, pipelines are also the only mode of transport in high terrain and underwater areas not accessible by road and rail.

**Exhibit 17: Pipe transportation is cheaper than rail and road**

Cost of transportation through various mediums (Rs/ton/km)

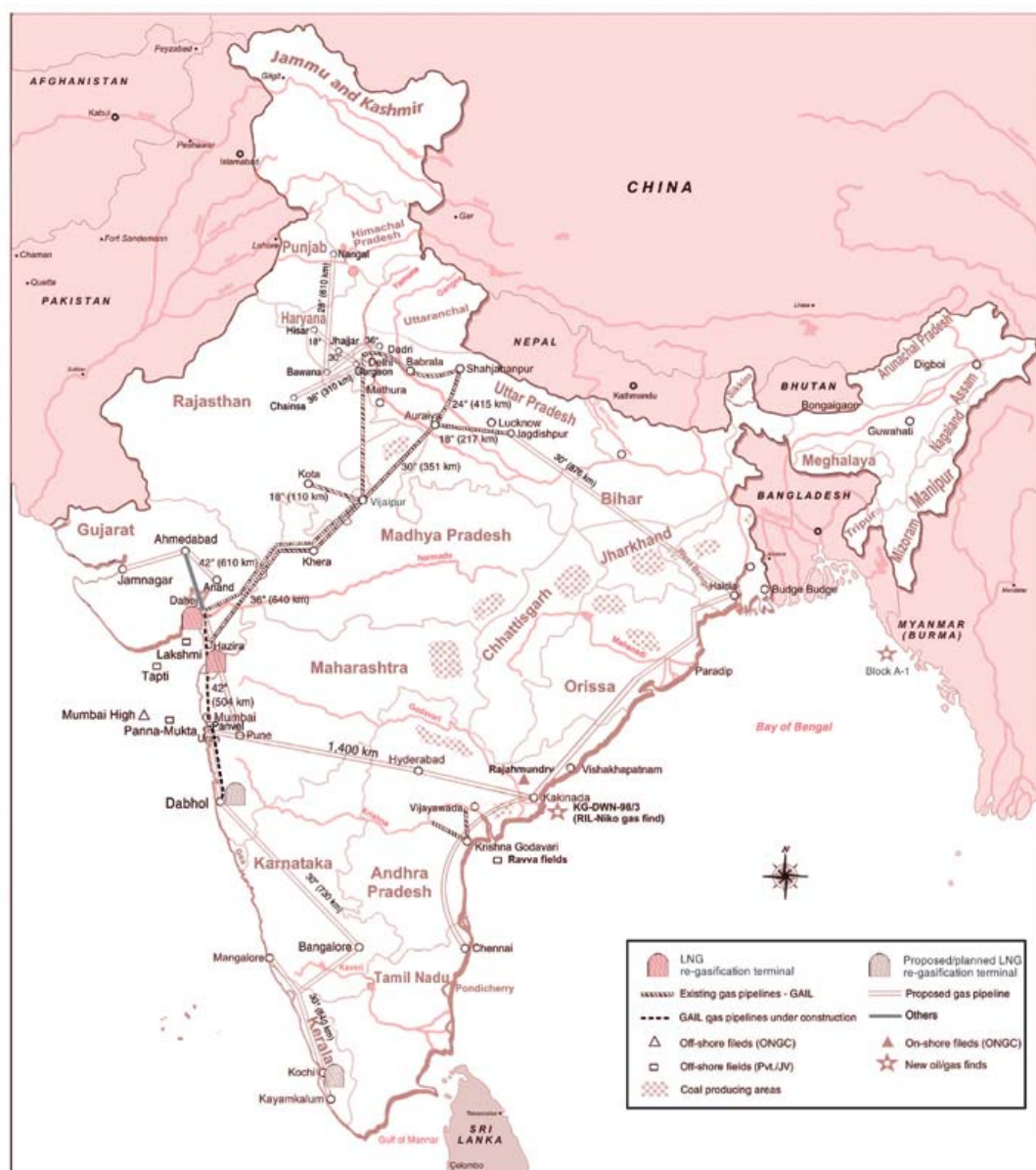


Source: Cris Infac.

**Gas to be the main driver for domestic linepipe demand**

Gas' share of India's primary energy will increase rapidly over the next few years driven by new discoveries of gas in India and India's increasing dependence on imports for its oil requirements. We note that gas pipeline infrastructure in India is expected to increase by 124% to 16,365 km from the present 7,303 km. With huge gas reserves discoveries, domestic oil & gas companies have lined up large capex plans to set up the cross country pipeline infrastructure.

Exhibit 18: Gas pipeline infrastructure to increase substantially in India with cross-country pipelines  
Gas pipelines in India - existing and proposed



Source: Infraline, Kotak Institutional Equities.

### GAIL—setting up a national gas grid

GAIL, the country's largest gas transmission and marketing company, is setting up a national gas grid to supply gas to large industrial areas across the country which will require substantial quantity of pipes. We expect GAIL to add 3,942 km of gas pipeline over the next 3-5 years.

**Exhibit 19: Gail plans to increase its pipeline network**

Proposed gas pipelines by GAIL

	<b>Length (km)</b>
Dahej–Panvel–Dabhol	576
Dadri–Bawana–Nangal pipeline	610
Chainsa–Gurgaon–Jhajar–Hissar	310
Jagdishpur–Haldia	876
Dabhol–Bangalore	730
Kochi–Kanjirakkod–Bangalore/Mangalore	840
<b>Total</b>	<b>3,942</b>

Source: Company data, Infraline, compiled by Kotak Institutional Equities.

**Reliance Industries group—set to become a large player**

We believe that nearly 35-40% of the gas pipeline infrastructure to be added in the country over next 3-5 years will be added by Reliance Industries group. Other players like GSPL, Reliance Industries group and Reliance Natural Resources (RNRL) have also announced major plans to expand their pipeline infrastructure in the country. Reliance, through its infrastructure company, has planned long distance pipelines to transport gas from its KG basin fields to western and southern markets.

**Exhibit 20: Reliance to set up pipelines to distribute gas from KG basin**

Gas pipelines proposed by Reliance Industries group

	<b>Length (km)</b>
Kakinada–Uran	1,400
Chennai–Tuticorin	670
Chennai–Bangalore–Mangalore	660
Kakinada–Basudebpur–Howrah	1,100
<b>Total</b>	<b>3,830</b>

Source: Company data, Infraline, compiled by Kotak Institutional Equities.

**GSPL—regional player**

GSPL has envisaged the Gujarat gas grid project to transport gas to demand centers all over the state. It commenced around 772 km of pipelines in 2007 and proposes to add a further 1,290 km.

**Exhibit 21: GSPL to expand its gas network in Gujarat**

Proposed gas pipelines by GSPL

	<b>Length (km)</b>
Bharuch–Jamnagar	315
Dahod–Pipavav	250
Baroda–Halol	60
Morbi–Mundra	250
Dhanduka–Jafrabad	225
Bhadbhut–Hadala	190
<b>Total</b>	<b>1,290</b>

Source: Company data, Infraline, compiled by Kotak Institutional Equities.

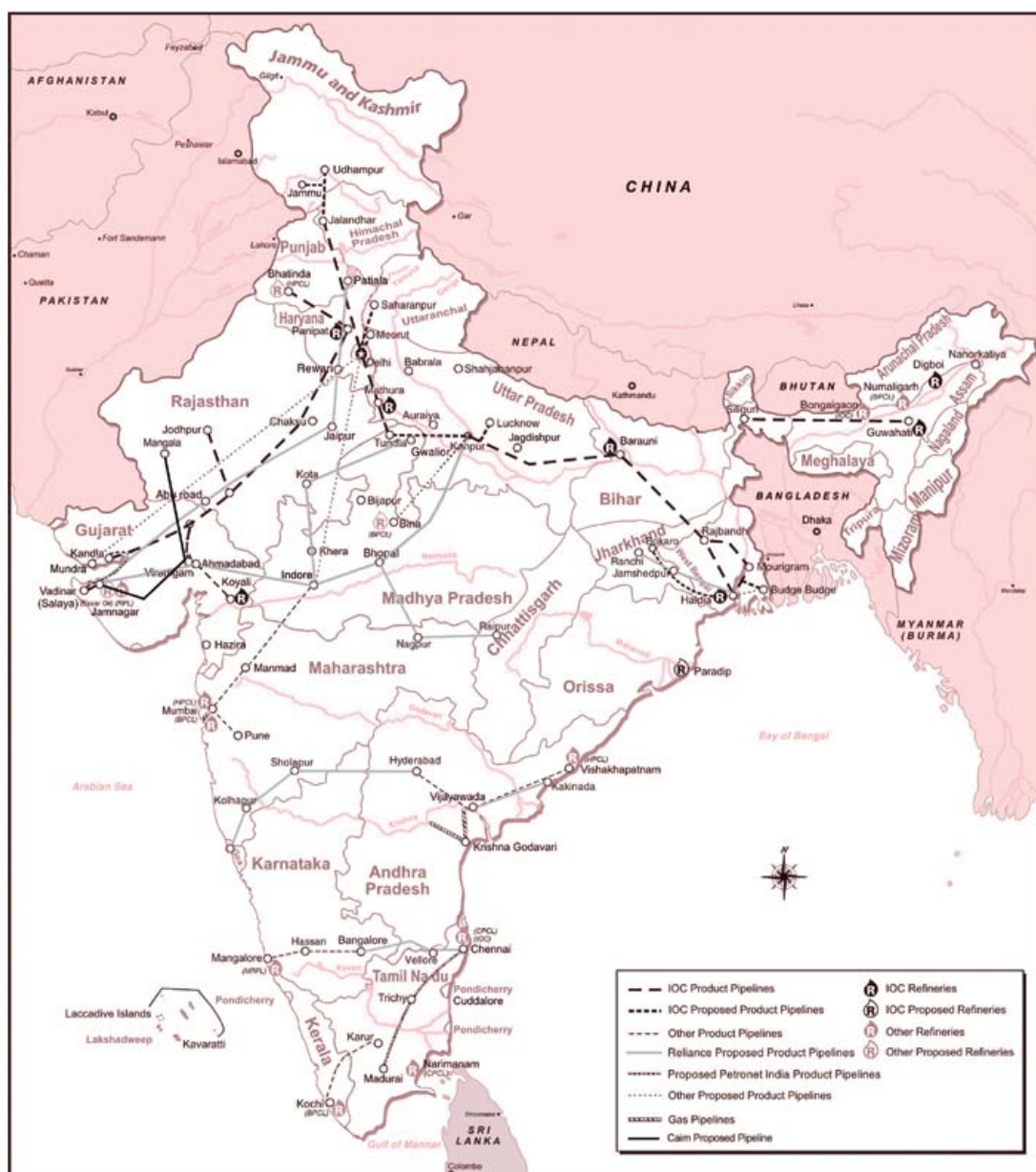


## Product and crude pipelines—another one from the energy sector

We expect 10,388 km of product and crude pipeline to be added in the country over the next 3-5 years. We believe with the increase in refining capacity in the country, there will be a significant requirement for the product and crude pipelines over the next 3-5 years. Pipelines will be required crude for connecting sources to refineries and later transporting products from refineries to consuming centers.

### Exhibit 22: Crude and product pipeline map and details

Crude and product pipelines- existing and proposed



Source: Infraline, Kotak Institutional Equities.

## Water management to be another key driver for linepipes

We believe increasing focus of the Indian government and growing interest of private bodies in developing the water infrastructure in the country will also drive demand for HSAW and DI pipes. We note that US\$4 bn worth of water projects are currently under various stages of constructing, planning and designing in the country (see Exhibit 25). The Central government is negotiating US\$270 mn line of credit with the Asian Development Bank (ADB) through which it plans to finance the overhaul of the infrastructure and institutions governing the states' water supply. Apart from this, ADB is currently funding a few other water distribution projects in association with the state governments.

**Exhibit 23: World Bank aid to facilitate fresh investment in many new water projects**  
Current and proposed World Bank aided water projects

Project	Status	Approval date	Closing date	Cost (US\$ mn) (a)
Kerala Rural Water Supply and Environmental Sanitation Project	Active	7-Nov-00	31-Dec-07	90
Second Karnataka Rural Water Supply and Sanitation Project	Active	18-Dec-01	31-Dec-07	193
Maharashtra Rural Water Supply and Sanitation "Jalswarajya" Project	Active	26-Aug-03	30-Sep-09	269
Karnataka Urban Water Sector Improvement Project	Active	8-Apr-04	31-Dec-08	52
Hydrology Project Phase II	Active	24-Aug-04	30-Jun-12	135
Uttaranchal Rural Water Supply and Sanitation Project	Active	5-Sep-06	30-Jun-12	224
Punjab Rural Water Supply and Sanitation	Active	14-Dec-06	31-Mar-12	261
TN Irrigated Agri. Modernization and Water-Bodies Restoration and Mngmt. Project	Active	23-Jan-07	31-Mar-13	566
IN: National Urban Infrastructure Fund	Proposed	N/A	N/A	200
Integrated Coastal Zone Management Project	Proposed	N/A	N/A	107
Andhra Pradesh Rural Water Supply & Sanitation Project	Proposed	N/A	N/A	250
Delhi Water Supply & Sewerage	Proposed	N/A	N/A	250
Capacity Building for Urban Local Bodies - NURM Capacity Building	Proposed	N/A	N/A	40
Tamil Nadu Rural Water Supply and Sanitation Project	Proposed	N/A	N/A	625
Dam Rehabilitation & Improvement Project	Proposed	N/A	N/A	400
Andhra Pradesh Urban Reform & Municipal Services Project	Proposed	N/A	N/A	303

Note (a): Cost represents total cost for commissioning of the water project - not specifically the pipeline cost.

Source: World Bank.

Major states where water supply projects have been undertaken aggressively include Kerala, Andhra Pradesh, Karnataka, Tamil Nadu, Rajasthan and Gujarat. The state governments have initiated projects with the aid of World Bank and ADB to set up pipe infrastructure for water management. We expect this to be a significant source of high demand for the HSAW and DI pipes. We believe dismal sanitation levels and the increasing need to provide clean and safe drinking water in the country, especially in rural areas, will call for high investments in water management projects.

## Supply: India's pipeline of plenty to address global imbalance

We expect global supply for LSAW and HSAW pipes to remain tight, especially in the North American region as most of the global producers report strong capacity bookings over CY2007-2008. Increasing acceptance of spiral (HSAW) for onshore applications in the US, Middle-East and India is driving volume growth for Indian players, which have large available spiral capacities. We expect HSAW volumes for these players to increase at a CAGR of 30.5% over FY2007-10E as they increase their exports to supply-deficit regions.

## Not enough supply despite globally distributed capacities

Despite widespread global capacities, we expect to see demand-supply in the linepipe market be precariously balanced over the next 2-3 years before significant capacities get added. We expect annual demand over CY2007-2009 to be around 19-20 mn tons against a global production of 17 mn tons of LSAW and HSAW during CY2006 (see Exhibits 24 and 25). Metal Bulletin Research (MBR) expects 23.2 mn tons of large-diameter linepipe demand for 2007. We expect supplies to increase gradually and expect around 2.5 mn tons (of 5 mn tons) (see Exhibit 29) of further large-diameter linepipe capacities to come on stream before end-CY2008.

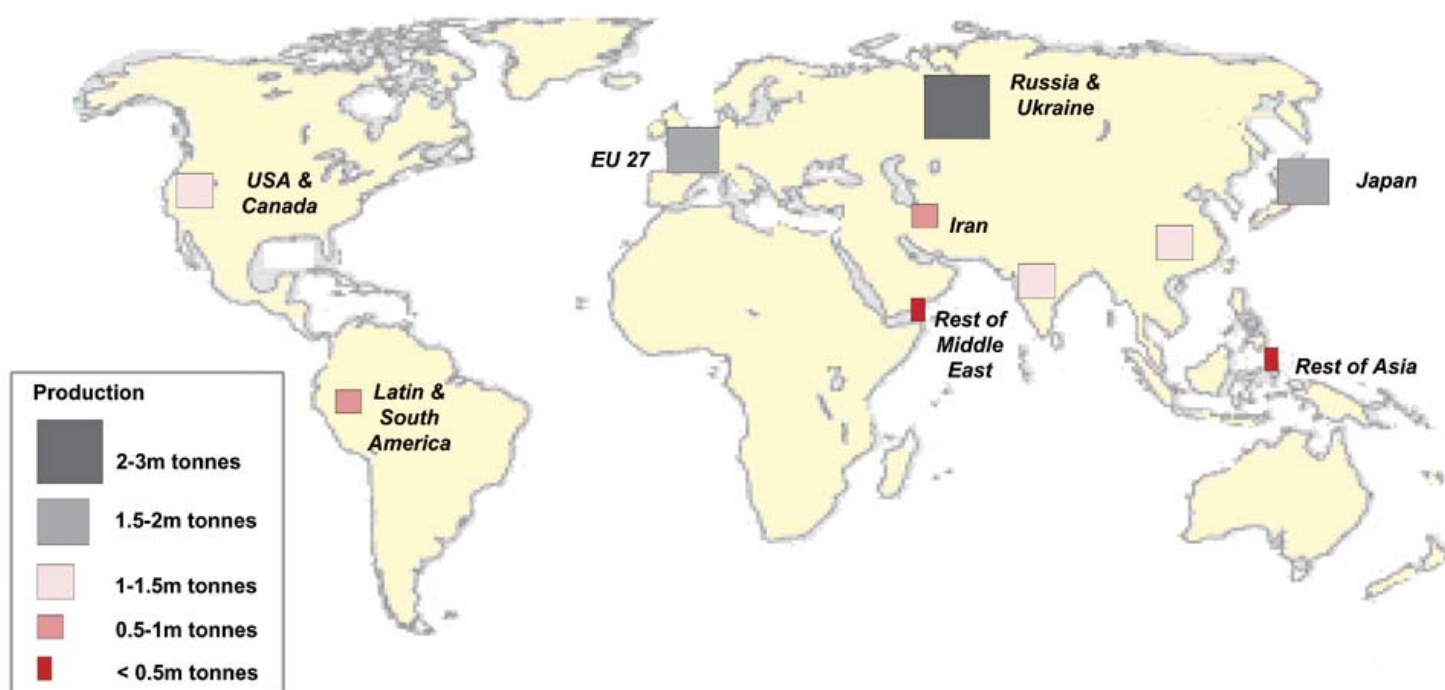
Exhibit 24: Global HSAW production in 2006 by region  
Total global HSAW production in 2006 estimated at 6.3 mn tonnes



Source: Hatch Beddows.

Exhibit 25: Global LSAW production in 2006 by region

Total global LSAW production in 2006 estimated at 10.8 mn tonnes



Source: Hatch Beddows.

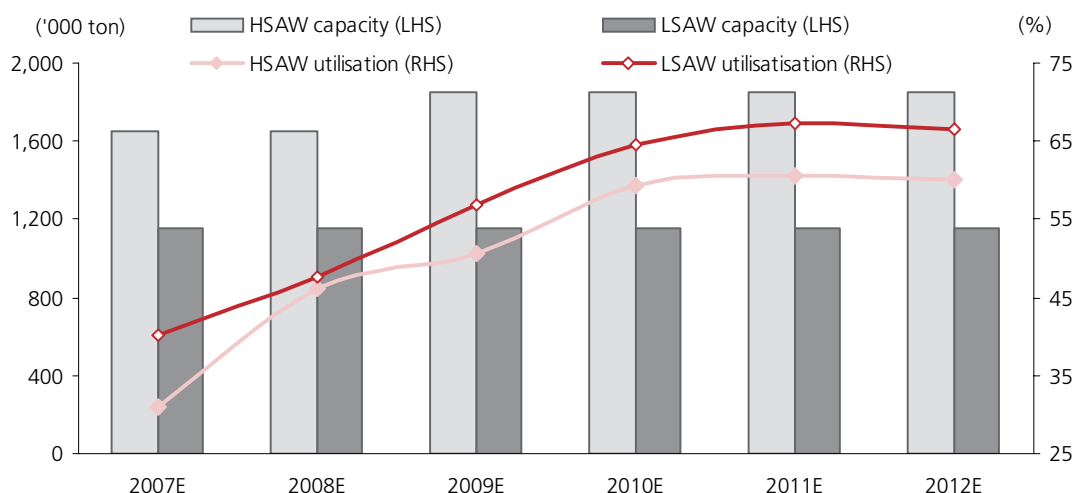
Linepipe demand, especially in the large-diameter category, has been quite strong since CY2006 in supply-deficient regions such as North America, Latin America and Middle East. Though there is large supply in Europe, Russia and China, we believe that large pipeline infrastructure addition in these geographies leaves little surplus to export to other geographies. Apart from this, Japanese players continue to face duties for exports to the USA, thus rendering their product uncompetitive. We believe this opens a large opportunity for Indian linepipe players to export to these supply-deficient regions.

### Good prospects for Indian linepipe manufacturers

We expect Indian linepipe manufacturers to make the most of the current supply-demand imbalance in the global large-diameter linepipe space. We expect our universe of linepipe companies to post a CAGR of 29% and 17% in HSAW and LSAW volumes, respectively, over FY2007-2010E, respectively. We note that these companies are already exporting to North America, Middle East, Latin America and Africa and have seen large export order flows from these countries due to limited capacities globally. The combined order book from exports for these companies at present is Rs90 bn (US\$2.3 bn), which is 78% of their total order book (see exhibit 9). We expect with their further capacity additions in USA in the next 12 months, these players will be able to capture a larger share of North American demand.

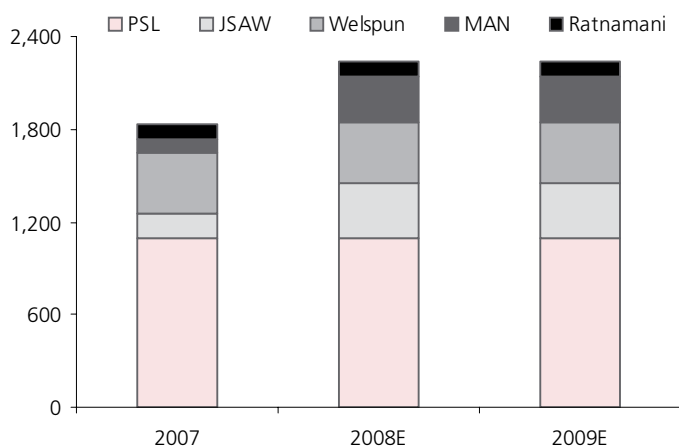
**Exhibit 26: Capacity utilization to improve for our universe of linepipe companies**

Indian capacities and capacity utilization for our universe of companies

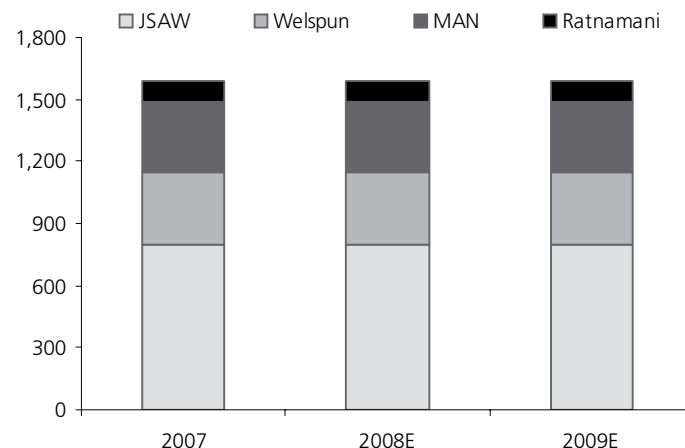


Source: Company data, Kotak Institutional Equities estimates.

Indian linepipe manufacturing industry is highly competitive and concentrated with just 5 players with an annual capacity of 3.4 mn tons. We note that Indian linepipe companies are very competitive globally in HSAW and with the improving availability of API grade plates in India next year, we could see these players gaining further strength in the global LSAW market as well. Further, Indian players are building capacities in the Middle East and USA to make the most of the high demand for spiral pipes in these regions.

**Exhibit 27: Five players control most of the HSAW capacity in India**  
Domestic HSAW capacity of major Indian producers (excludes capacities outside India), ('000 tons)

Source: Company data, Kotak Institutional Equities

**Exhibit 28: No capacity expansion in LSAW planned in India**  
Domestic LSAW capacity of major Indian producers (excludes capacities outside India) ('000 tons)

Source: Company data, Kotak Institutional Equities.

## Large linepipe capacity additions planned globally

We note that LSAW and HSAW pipe production capacity is expected to rise by 5 mn tons by 2010 (see Exhibit 29). However, we do not estimate more than 2.5 mn tons getting added before CY2008-end, thus keeping the supply-demand balance tight in CY2007 and CY2008. We believe with the new pipe mills coming onstream in CY2007-10, supply shortages should ease and the realizations peak in CY2009. Moreover, with the Chinese projects approaching completion, we could see increasing supplies from China on the LSAW export market.

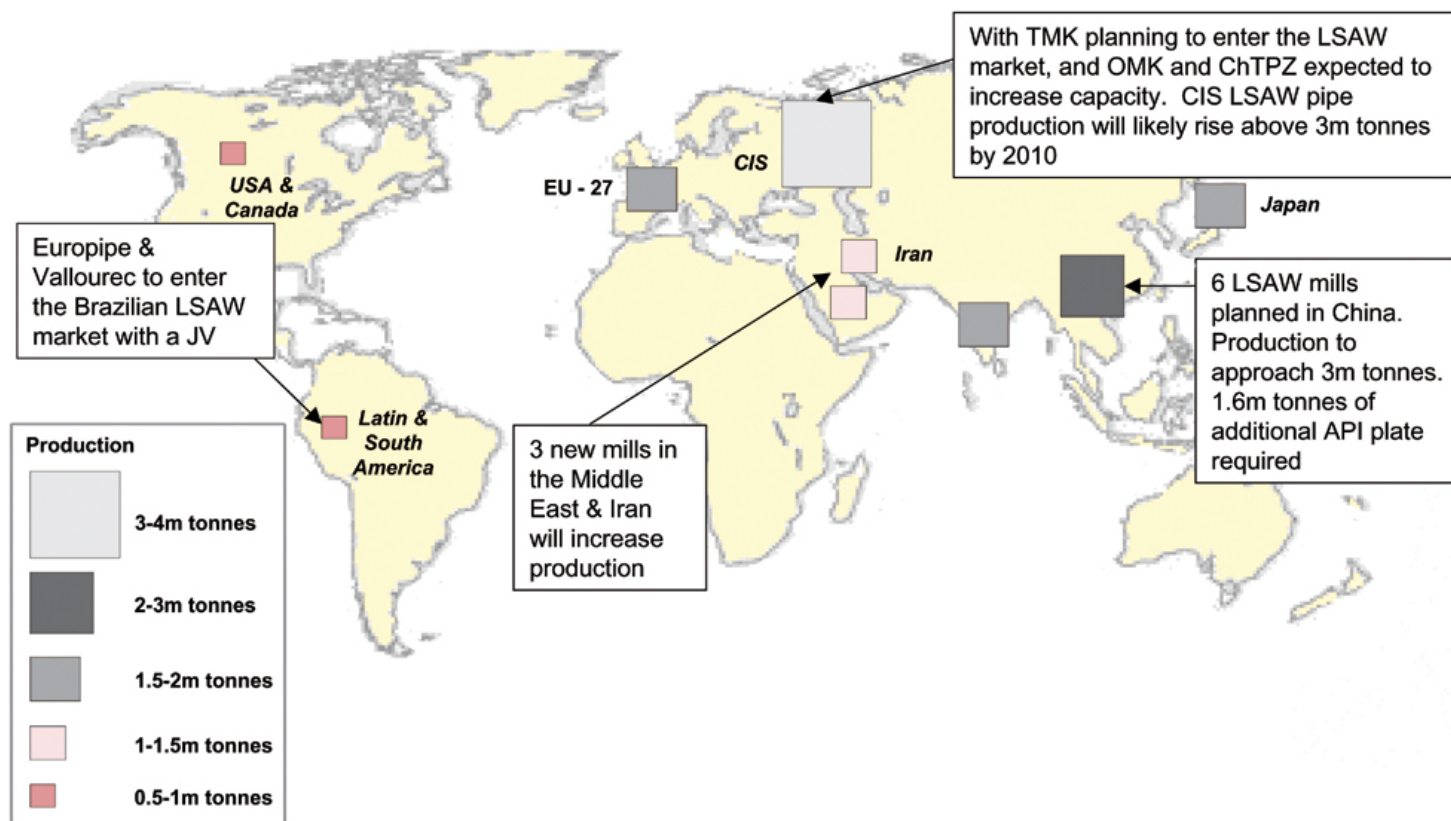
**Exhibit 29: Large linepipe capacities planned over next 2-3 years**  
Announced pipe capacity expansions

Company	Country	Capacity (tons)	Start Date
Baosteel	China	400,000	2007
Khartsyzsk	Ukraine	200,000	2007
Arabian pipes	Saudi Arabia	300,000	Early 2007
Europipe/Ahwaz	Iran	400,000	2007
Europipe/V&M	Brazil	90,000	NA
Severstal - Izhora 2	Russia	450,000	NA
Iraq Industry of Minerals	Iraq	350,000	2006-2009
OMK	Russia	350,000	NA
<b>Total LSAW</b>		<b>2,540,000</b>	
Berg	USA	200,000	Mid 2008
TMK	Russia	70,000	Q1 2007
Alison	China	150,000	2007
Borusan Mannesmann	Turkey	200,000	2007
Borusan Mannesmann	Central Asia	200,000	2008
Ipsco	USA	200,000	2008
Oregon Steel	USA	220,000	Q4 2006
Iraq Industry of Minerals	Iraq	150,000	2006-2009
USS-POSCO-SeAH	USA	300,000	2008
PSL	USA	300,000	Q2 2008
Welspun	USA	300,000	2008
Jindal Saw	India	200,000	2008
<b>Total HSAW</b>		<b>2,490,000</b>	
<b>Total HSAW + LSAW</b>		<b>5,030,000</b>	
Ipsco	USA	250,000	2008
Shuangjie	China	250,000	2007
Adpico	UAE	200,000	2007
<b>Total ERW</b>		<b>700,000</b>	
<b>Total Welded Pipe</b>		<b>5,730,000</b>	

Source: Metal Bulletin Research, Kotak Institutional Equities.

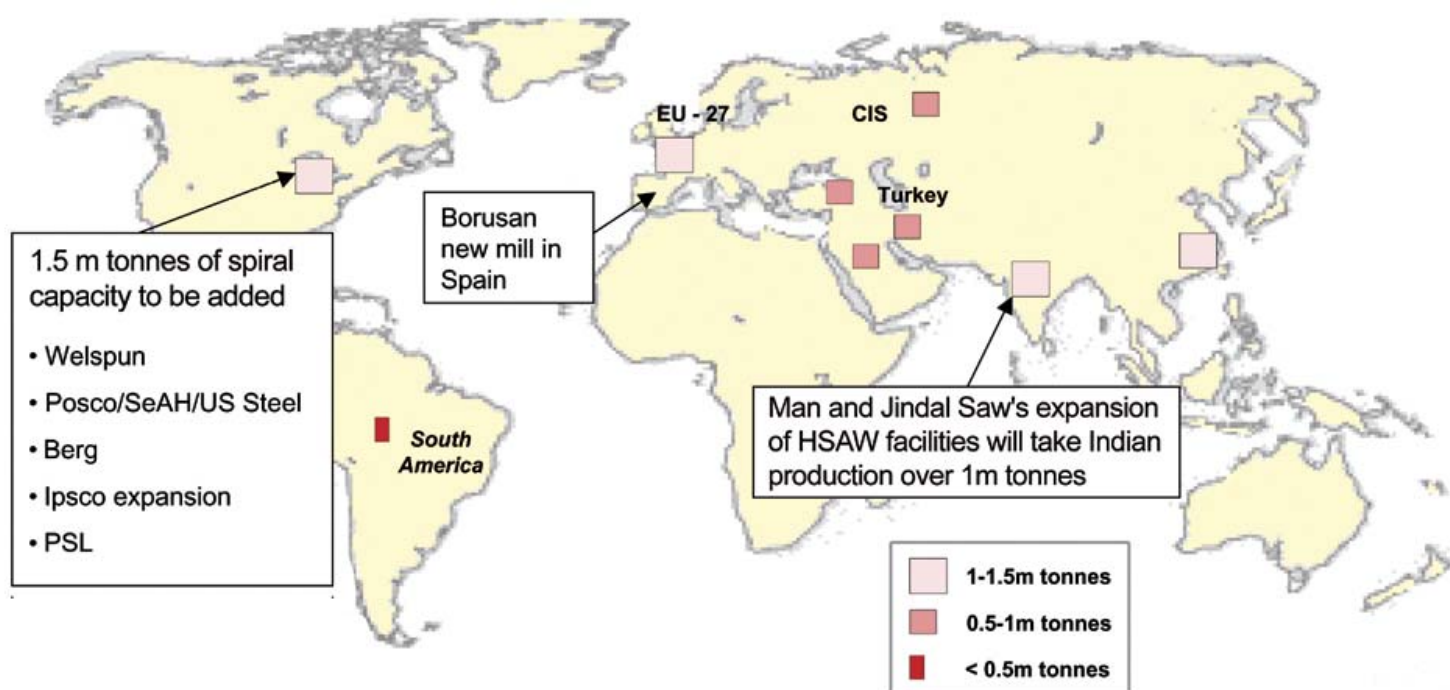


Exhibit 30: Forecast global LSAW pipe potential production in 2010



Source: Hatch Beddows.

Exhibit 31: Forecast global HSAW pipe potential production in 2010

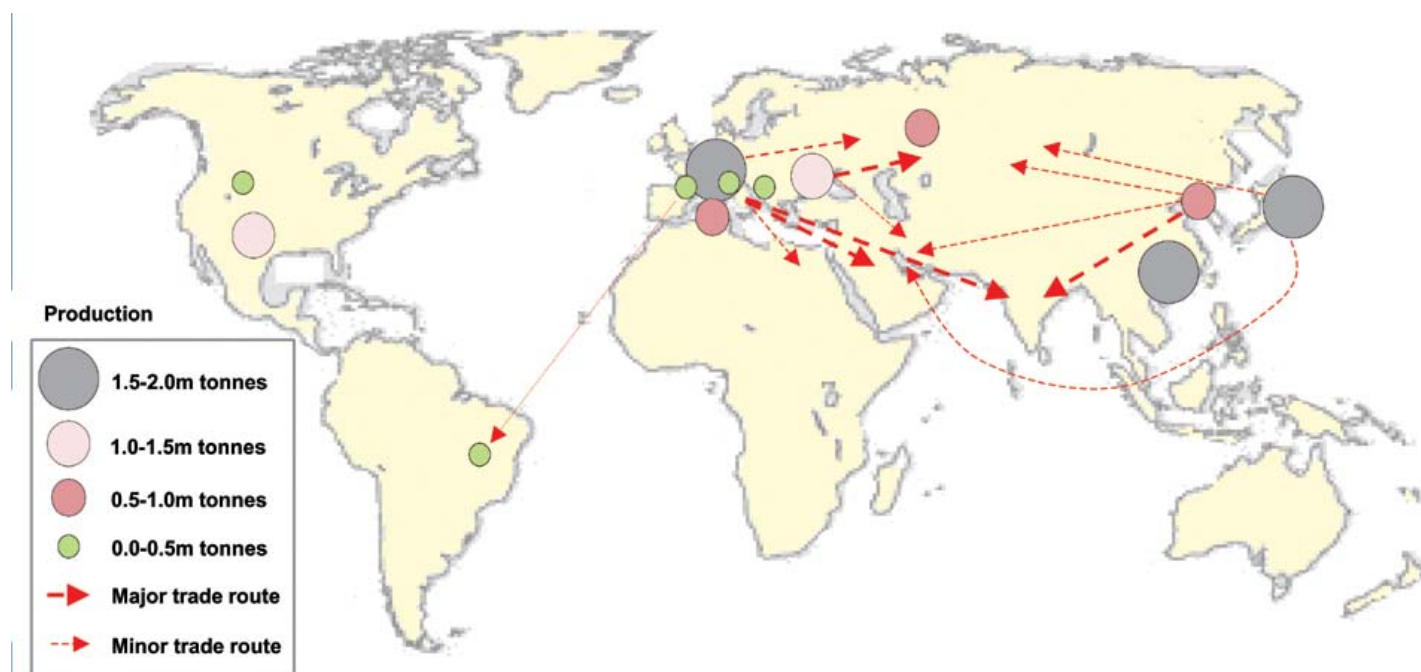


Source: Hatch Beddows.

### LSAW capacity and prices a function of API grade plate availability

We note that LSAW linepipe prices have been ruling high due to bottlenecks in API plate supplies. API plate production has been historically dominated by Western Europe and Japan, requiring imports into supply deficient regions- India and Russia. (see Exhibit 32). We believe as the new plate mills capable of producing API plate start in these supply- deficient regions, we could see LSAW becoming more competitive in international markets. In India, about 5 mn tons of plate mill is expected to get operational over CY2007-2009 (see Exhibit 33).

**Exhibit 32: API plate production historically dominated by Western Europe and Japan, increasing import into India, Russia**  
Total global API plate production in 2006 estimated at 10.6 mn tonnes



Source: Hatch Beddows.

**Exhibit 33: Large plate capacities planned over next two years**  
Announced API grade plate mill capacities

Producer	Country	Max width (mm)	Start Date	Capacity mn tons
OMK	Russia	5,000	2010	1.20
MMK	Russia	4,800	mid-2009	1.50
Severstal	Russia	5,000	2008	1.00
<b>Russia total</b>				<b>3.70</b>
Welspun	India	4,500	2008	1.50
Essar Steel	India	5,000	Q4 2007	1.50
Jindal Steel & Power(1)	India	3,800	April 2007	1.00
Jindal Steel & Power	India	5,000	2008/9	1.20
<b>India total</b>				<b>5.20</b>
Yingkou	China	5,000	Q4 2009	2.30
Baotou	China	3,700	Q4 2007	1.40
<b>China Total</b>				<b>3.70</b>
<b>Grand Total</b>				<b>12.60</b>

Note:

(1) Started in April 2007

Source: Hatch Beddows.

A shortage of API plates has not only pushed LSAW pipe prices higher but also increased the demand for HSAW pipes for onshore applications. Despite upcoming LSAW capacities in the next 2-3 years (see Exhibit 29), we believe availability of API plates will determine real supply-demand for LSAW pipes. increasing availability of plates will reduce the differential between HSAW and LSAW pipe prices.



## Key risks—increasing supplies, lower demand, competition

**Faster-than-expected addition of linepipe capacity could weaken the pricing advantage that Indian linepipe players are expected to enjoy for the next 2-3 years. We note that around 5 mn tons of linepipe (theoretical) capacity is expected to be added worldwide over next three years (see Exhibit 29). Also, outside the US, we could see competition increasing from Western European, Japanese and Chinese players. Finally, any slowdown in pipeline demand due to lower energy costs or increasing input costs could adversely impact volumes.**

### Faster-than-expected linepipe capacity additions globally (primarily US)

We note that addition of around 5 mn tons of linepipe (LSAW and HSAW) capacities has been announced worldwide (see Exhibit 29). We expect of these 5 mn tons of capacity, just under 2.5 mn tons of large-diameter linepipe capacity will come on stream by end-CY2008 end. Any faster-than-expected linepipe addition or revival of unutilized capacities will ease the tight supply-demand balance much earlier-than-expected, thus adversely impacting realisations, volumes and margins for Indian linepipe manufacturers. Though we build a price decline into FY2010, we note price declines can take place much earlier if all the new capacity were to come up as scheduled or earlier than that. We expect global annual demand for large-diameter linepipes to be around 19-20 mn tons for CY2007-2009. Global HSAW and LSAW production for CY2006 was around 17 mn tons (see Exhibits 24 and 25).

### Slowdown in linepipe demand—global and/or domestic

We expect large-diameter linepipe global demand to increase from 17 mn tons in CY2006 to 19-20 mn tons/annum in CY2007-2009. Any slowdown in this demand due to a drop in energy prices, delay in projects or deferment of projects due to rising input costs could hamper volumes and the earnings of these companies. We note that oil prices are forecasted to remain above US\$60/barrel through to 2008 (source: EIA), which could keep large-diameter linepipe projects financially viable. However, oil majors maintain that rising input costs could put off some projects.

We expect that apart from exports, Indian linepipe companies will receive large orders from domestic oil & gas majors for roll-out of the planned linepipe infrastructure (see Exhibit XX). We believe domestic orders will keep linepipe demand high post CY2009 for Indian companies, as India looks at doubling its pipeline infrastructure in next 4-5 years. We expect annual Indian demand to be around 2,500-3,000 km over the next five years.

### Competition—China could target exports in Asian regions

We note that with large capacities becoming operational in US over the next 2-3 years, Indian players would have to actively explore other regions such as Africa to increase its exports. Though Indian players export to Middle East and Latin America, we expect markets outside USA will see high competition as players from other geographies such as china, Japan increasingly target these markets.

We believe China, which has seen linepipe imports drop to 12,000 tons (2006) from around 295,000 tons (2003) could have an increasing presence on the LSAW export market once the West-East pipeline development is complete. Already, we find Chinese players exporting spiral linepipes to Reliance Industries group in India. However, we believe there is a possibility that competition from China may not be intense as potential pipelines from Russia, Central Asia and the Caspian could keep Chinese LSAW/HSAW producers further busy. Further, Japanese players, which face duties in US, will also try to increase their exports to Africa and Middle East. However, we build declining volumes and realisation for Indian players post FY2010.

### Lower LSAW prices could reduce HSAW cost competitiveness

We believe with the planned API plate mills, there should not be a bottleneck in API plate supplies, thus reducing the pricing differential between LSAW and HSAW. Apart from the tight supply-demand for LSAW pipes, a shortage of API plates and the resultant higher prices of LSAW pipes could increase demand for spiral pipes for onshore applications.

We note that new mills capable of producing API plates will open in regions very short of supply (Russia and India) helping reduce LSAW input costs and thus making them more competitive in the international market. We believe with nearly 5 mn tons of plate mill capacity planned in India (see Exhibit 34), plate prices could become lower for Indian LSAW manufacturers. Though we expect this to improve margins for LSAW players, we note that it could put some pressure on HSAW pipes pricing.

**Exhibit 34: Large plate capacities planned over next two years**  
Announced API grade plate mill capacities

Producer	Country	Max width (mm)	Start Date	Capacity mn tons
OMK	Russia	5,000	2010	1.20
MMK	Russia	4,800	mid-2009	1.50
Severstal	Russia	5,000	2008	1.00
<b>Russia total</b>				<b>3.70</b>
Welspun	India	4,500	2008	1.50
Essar Steel	India	5,000	Q4 2007	1.50
Jindal Steel & Power(1)	India	3,800	April 2007	1.00
Jindal Steel & Power	India	5,000	2008/9	1.20
<b>India total</b>				<b>5.20</b>
Yingkou	China	5,000	Q4 2009	2.30
Baotou	China	3,700	Q4 2007	1.40
<b>China Total</b>				<b>3.70</b>
<b>Grand Total</b>				<b>12.60</b>

Note:

(1) Started in April 2007

Source: Hatch Beddows.

## Steel pipes—products and technology

### Differentiated according to manufacturing process

Steel pipes are used for a variety of purposes ranging from cross-country transportation of oil & gas and water to branch distribution of water, housing and sanitation. Based upon process and utility, steel pipes are further classified into Helical Seam Submerged Arc Welded (HSAW)—also known as spiral, Longitudinal Seam Submerged Arc Welded (LSAW)—also known as longitudinal, Electric Resistance Welded (ERW), Seamless and Ductile Iron (DI).

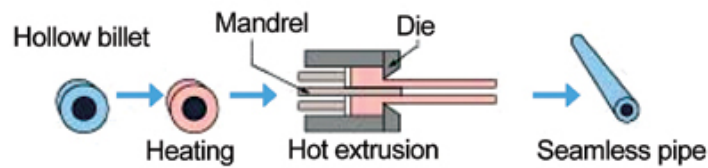
**Exhibit 35: Pipes are classified based upon manufacturing process**  
Comparison of various types of steel pipes

	<b>Spiral/Helical SAW pipes (HSAW)</b>	<b>Longitudinal SAW Pipes (LSAW)</b>	<b>Seamless tubes</b>	<b>Ductile iron pipes</b>	<b>Electric resistance welded (ERW)</b>
Raw material & process	Spiral welding of hot rolled steel coils	Longitudinal welding of specified grade steel plates	Cross roll piercing and elongating of specified grade steel billets	Casting of iron ore	Electrical resistance welding of hot rolled steel coils
Application	Crude pipelines, low pressure gas and water applications	High pressure gas application	Drilling in E&P, automotive axles, high pressure boilers	Water transportation, sanitation & housing	Water distribution, Low pressure distribution pipelines
Observed size (diameter)	18-120 inches	16-56 inches	1/2-14 inches	3-39 inches	1/2-22 inches
Main players-domestic	PSL, Jindal Saw, Welspun Gujarat, Man Industries	Jindal Saw, Welspun Gujarat, Man Industries	Maharashtra Seamless, Jindal Saw	Jindal Saw, Electrosteel Castings	Maharashtra Seamless, Welspun Gujarat
Main players-International	Corinth, Salzgitter, IPSCO, TMK	Europipe, Sumitomo	Tenaris, Volsky, Vallourec, V&M pipes	U.S. Pipe, ACIPCO	IPSCO, Maverick, TMK, Corinth
Usage	Trunk lines - water, oil and gas	Trunk lines - oil and gas	Drilling	Branch lines for water transportation	Branch lines - water oil and gas
Theoretical limitation	Cannot be used for offshore pipelines following perceived inability to withstand water currents	Plate width determines pipe diameter; cannot build pipes above 56 inches	Considered best in class as no seam present; virtually irreplaceable by other pipes	Limitation on size and usage	Size, thickness and grade
Practical limitations	HR coil wall thickness beyond 25 mm is difficult to obtain	Specified API grade plates are in short-supply			

Source: Company presentations, Kotak Institutional Equities.

Exhibit 36: Pipes differ according to manufacturing process  
Pipe manufacturing processes

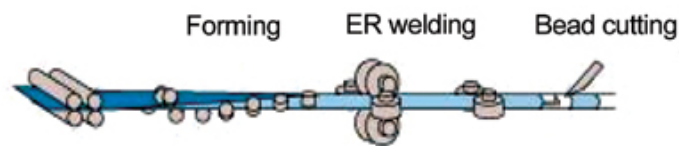
### Seamless pipe



### MAIN APPLICATIONS

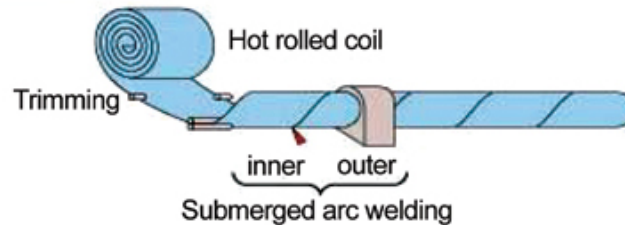
**OCTG**  
**Refinery**  
**Nuclear**

### ERW pipe



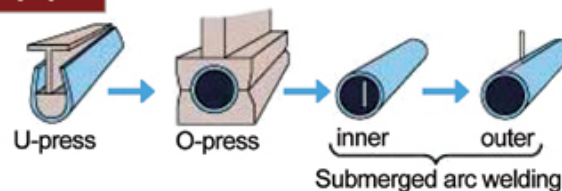
**Oil**  
**Gas**  
**Water**

### Spiral pipe



**Gas**  
**Water**

### UOE pipe



**Offshore**

Source: Corinth presentation.

## HSAW or LSAW?

We believe HSAW and LSAW pipes can be used interchangeably and there is no definitive basis for choosing either. We expect HSAW to be the first choice in India due to its lower cost and wider raw material availability. However, in global markets, we believe HSAW will be preferred for all onshore activities and for water transportation; LSAW will find application mainly in offshore and very high pressure pipelines.

### HSAW gaining acceptance but not all the way

Traditionally, LSAW pipes have been used globally for oil & gas and water sectors. However, in the past 20 years, HSAW pipes are increasingly being used for their cost competitiveness and for large-diameter applications. Despite this, HSAW has not been totally accepted as a direct substitute for the LSAW pipes due to inherent belief that HSAW cannot be used for all purposes such as high pressure applications.

HSAW pipes have a weld length of more than 2-3 times that of the LSAW pipe and hence considered to be more vulnerable to leakage. However, with improved welding technology this apprehension has been reduced leading to increasing acceptance of HSAW pipes by the oil and gas sector.

### Governing bodies do not differentiate between the two

The Centre for High Technology (CHT) in its report to the parliamentary committee formed for investigating into GAIL's tender issued for the Dahej- Vijayanagar Pipeline (DVPL) project stated — **"(a) the international codes and standards do not differentiate between LSAW and HSAW pipes, and (b) in order to eliminate doubts in respect of quality of pipes, the owner should rightly satisfy itself about the manufacturing technology."**

As per the report of the parliamentary committee, "the performance parameters specified by various international agencies like API, British Standards, European Standards etc. do not specify that only HSAW can be used or only LSAW can be used. **These standards only say about the process of manufacture, metallurgy, diameter, wall thickness, weight per meter and the specified mills.**" Hence it was concluded that as long as the pipe caters to these specifications it does not matter whether it is HSAW or LSAW pipe and both can be used interchangeably.

Earlier a high level expert committee on the Dahej-Uran Pipeline (DUPL) project had also opined that given the present technology and inspection techniques, both HSAW and LSAW pipes could be used for high pressure gas pipelines, with limitation of 20 mm on wall thickness for HSAW pipes.

Exhibit 37 compiles the major differentiating parameters between HSAW and LSAW pipes.

Exhibit 37: Comparative analysis of HSAW and LSAW pipes

	<b>HSAW</b>	<b>LSAW</b>
Raw material	HR steel coil	Steel plate
Selling price (US\$/ton) (a)	1,000-1,100	1,300-1,400
Raw material availability	Relatively high	Relatively tight
Process	Spiral weld	Longitudinal weld
Approximate yield loss	4-5%	1-2%
Relative processing cost	High	Low
Max size (dia) (b)	120 inches	56 inches
Max thickness (b)	25 mm	38 mm

## Notes:

(a) Selling price is Kotak's estimate of green (uncoated) pipe for API-X65 grade delivered FOB.

(b) Kotak estimates based on pipes manufactured in India.

Source: Kotak Institutional Equities.

We believe the high cost differential and increased confidence about the usability would make HSAW pipes the first choice of customers. However, for the offshore and very high-pressure applications which require greater wall thickness, LSAW would continue to be preferred as coils of higher thickness remain unavailable. Similarly, for large-diameter pipes, especially those used for water transportation, LSAW will find very limited use due to non-availability of larger width plates.

## Company profiles

Jindal Saw

PSL

Welspun Gujarat Stahl Rohren





**Comprehensive pipe portfolio.** We believe Jindal Saw's well-diversified pipe portfolio will enable it to ride the wave of investment in the oil & gas and water sectors. We expect increasing volumes across segments and better efficiencies to drive revenues and margins over FY2006-09E. We expect revenues and net earnings to grow at 28.4% and 51.8% CAGR, respectively, over FY2006-09E. We initiate coverage with an Outperform rating and target price of Rs790.

### Valuations set to improve; initiate with Outperform

We believe strong growth in revenues and earnings will improve valuations for Jindal Saw (JSAW)—currently trading at 6.6X FY2009E earnings and 4X FY2009E EBITDA. Our 12-month DCF-based target price of Rs790 is based on a WACC and terminal growth rate of 12.5% and 1.5%, respectively. Our target valuation implies an exit EV/EBITDA multiple of 5.4X. We expect EBITDA margin and capacity utilization for JSAW to increase to 13% and 55%, respectively, in FY2009E (see Exhibit 45).

### Expansion follows diversification

We believe JSAW, with its diversified pipe product portfolio and global reach (through LSAW plant in US), is the best placed to capture the demand from high-demand regions for seamless, linepipes and water infrastructure projects. We expect upcoming expansions in HSAW and seamless to provide further momentum to its volume growth.

### Revenues and earnings to grow at 28.4% and 51.8% CAGR over FY2006-09E

We expect revenues and PAT to grow at a CAGR of 28.4% and 51.8%, respectively, over FY2006-09E. We expect strong volume growth and margin improvement from better capacity utilization to drive revenues and earnings. We expect utilization levels to improve to 55% in FY2009E from 37% in FY2006 as volumes rise to meet the increasing global demand for seamless and linepipes.

### Key risks—likely competition from HSAW in US, increase in tolling charges

We believe upcoming HSAW capacities in the US (see Exhibit 29) can increase competition for LSAW in the North American market given the large pricing differential between the two. Upward revision of slab-to-pipe tolling charges paid to associates may adversely impact margins in the US operations.

### Forecasts and valuation (consolidated)

September year-end	Sales (Rs mn)	EBITDA (Rs mn)	Adj. PAT (Rs mn)	EPS (Rs)	RoAE (%)	P/E (X)	EV/EBITDA (X)
2006	38,731	4,066	1,563	29.5	15.3	22.8	10.8
2007E	49,620	5,953	2,761	47.9	18.8	14.0	8.0
2008E	61,107	7,757	3,852	67.4	21.0	10.0	6.0
2009E	81,897	10,671	5,783	101.9	25.1	6.6	4.0
2010E	91,034	11,648	6,667	118.1	22.9	5.7	3.2

Source: Company data, Kotak Institutional Equities estimates.

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Kotak Institutional Equities  
Research

Important disclosures appear  
at the back of this report.

## Valuation: Target price of Rs790

Our 12-month DCF-based target price for JSAW is Rs790. We use a 1.5% terminal growth rate and expect EBITDA margin and capacity utilization for JSAW to increase to 13% and 55%, respectively, in FY2009E. We believe strong revenue and earnings growth will improve valuations for JSAW—currently trading at 6.6X FY2009E earnings and 4.0X FY2009E EBITDA. At our target valuation, the FY2009E earnings and EBITDA multiple will be 7.7X and 5.0X, respectively. Exit EV/EBITDA multiple at our target valuation is 5.4X.

### DCF-based target of Rs790

Exhibit 38: Our DCF-based target for JSAW is Rs790/share  
DCF-based valuation for JSAW (Rs mn)

	2007E	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	Terminal Value
EBITDA	5,953	7,757	10,671	11,648	11,495	11,294	10,150	9,603	9,640	9,679	9,719	
Tax expense	(1,491)	(1,870)	(2,667)	(3,309)	(3,876)	(3,798)	(3,372)	(3,089)	(3,100)	(3,025)	(3,040)	
Changes in working capital	(1,823)	(1,230)	(2,337)	(1,671)	105	391	1,172	926	(18)	(19)	(19)	
<b>Cash flow from operations</b>	<b>2,639</b>	<b>4,657</b>	<b>5,667</b>	<b>6,668</b>	<b>7,724</b>	<b>7,888</b>	<b>7,950</b>	<b>7,440</b>	<b>6,523</b>	<b>6,635</b>	<b>6,660</b>	
Capital expenditure	(3,188)	(2,240)	(270)	(366)	(467)	(478)	(490)	(502)	(515)	(528)	(1,082)	
<b>Free cash flow to the firm</b>	<b>(549)</b>	<b>2,417</b>	<b>5,397</b>	<b>6,302</b>	<b>7,257</b>	<b>7,409</b>	<b>7,460</b>	<b>6,938</b>	<b>6,008</b>	<b>6,108</b>	<b>5,578</b>	<b>51,468</b>
Discounted cash flow-now	(539)	2,108	4,184	4,343	4,445	4,034	3,610	2,985	2,297	2,076	1,685	
Discounted cash flow-1 year forward		2,371	4,707	4,885	5,001	4,538	4,062	3,358	2,584	2,336	1,896	
Discounted cash flow-2 year forward			5,295	5,496	5,626	5,106	4,569	3,777	2,908	2,627	2,133	

Discount rate 12.5%

Growth from 2017 to perpetuity 1.5%

<b>Discount factor at WACC</b>	<b>0.98</b>	<b>0.87</b>	<b>0.78</b>	<b>0.69</b>	<b>0.61</b>	<b>0.54</b>	<b>0.48</b>	<b>0.43</b>	<b>0.38</b>	<b>0.34</b>	<b>0.30</b>	
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	+ 1-year	+ 2-years
<b>Total PV of free cash flow (a)</b>	<b>35,738</b>	<b>67% 37,537</b>
PV of terminal value (b)	17,494	33% 19,681
EV (a) + (b)	53,232	57,218
<b>EV (US\$ mn)</b>	<b>1,314</b>	<b>1,413</b>
Net debt	9,059	4,782
<b>Equity value</b>	<b>44,173</b>	<b>52,436</b>
No. of shares	56.0	56.0
<b>Implied share price (Rs)</b>	<b>789</b>	<b>936</b>
Exit EV/EBITDA multiple (X)	5.4	
<b>Exit FCF multiple (X)</b>	<b>9.4</b>	

		Sensitivity of share price to WACC and growth rate (Rs)				
Growth Rate		WACC				
		11.5%	12.0%	12.5%	13.0%	13.5%
	0.0%	820	782	747	715	685
	0.5%	836	797	760	726	695
	1.0%	854	812	774	739	706
	1.5%	874	829	<b>789</b>	752	718
	2.0%	895	848	805	766	731
	2.5%	919	869	824	782	745
	3.0%	946	892	844	800	760

Source: Kotak Institutional Equities estimates.

## Optimistic scenario leaves a lot of upside

Exhibit 39 illustrates scenarios wherein we build an optimistic and a pessimistic view versus our assumed case. More benign combinations of realisations (5% lower than assumed) and raw material prices (5% lower than assumed) lead to lower valuations. Optimistic scenario assumes 5% higher realisations and similar raw material prices as in our assumed case.

Exhibit 39: Optimistic scenario leaves a lot of upside for JSAW  
JSAW DCF value sensitivity under various scenarios

Scenario	DCF value (Rs/share)	Scenario assumptions
Pessimistic	704	Realisations and material cost lower by 5%
Assumed	789	Our base case assumptions
Optimistic	1,063	Realisation up by 5%, material cost as in assumed case

Source: Kotak Institutional Equities estimates.

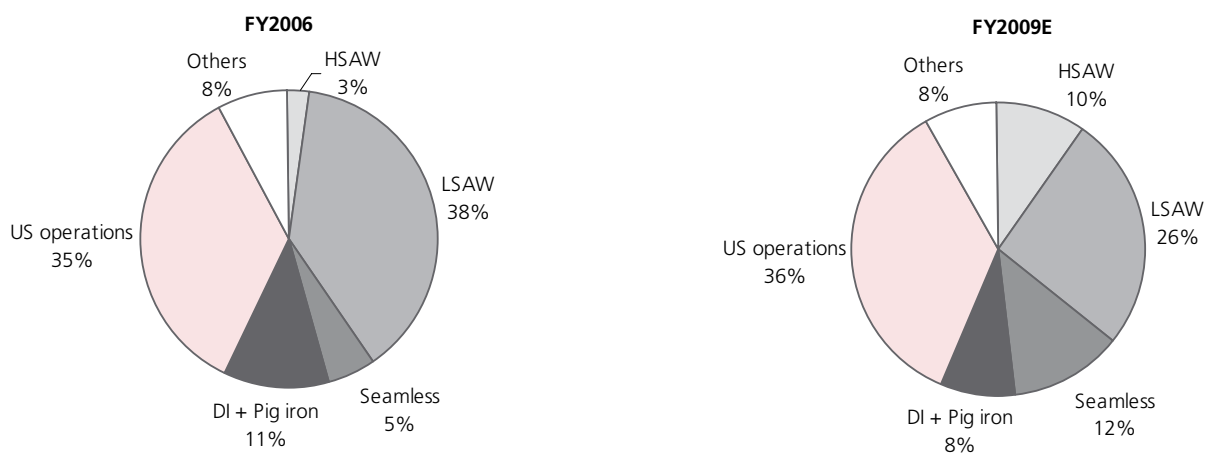
## Expansion follows diversification of products and geographies

We believe JSAW's product and geographical diversification is the key differentiating factor amongst Indian linepipe manufacturers. JSAW is the only Indian pipe manufacturing company with capacities for seamless, HSAW, LSAW and DI and the only one from India present in USA (LSAW plant). JSAW commands a 50% market share in the Indian energy sector for pipes consumption and is one of the two producers of water transportation pipes in India. We expect upcoming expansions in HSAW and seamless to provide further momentum to its volume growth.

### Expansion to propel diversified product portfolio

We believe the ongoing expansion across seamless and HSAW will propel diversified product portfolio of JSAW. We note that JSAW is the only pipe manufacturer present across pipe segments servicing energy and water infrastructure sectors. We expect revenues of JSAW to grow at a CAGR of 28.4% over FY2006-09E mainly supported by linepipes (HSAW & LSAW) and seamless volumes. We expect linepipe and seamless volumes to increase at a CAGR of 17% and 67%, respectively over FY2006-09E. JSAW is expanding its seamless and HSAW annual capacities to 250,000 tons and 350,000 tons from 100,000 tons and 150,000 tons, respectively. We expect domestic linepipes to contribute 36% of revenues in FY2009E (see Exhibit 40).

Exhibit 40: Share of HSAW and seamless in total revenues to increase to 22% in 2009 from 8% in 2006  
Revenue break up by product, September fiscal-year ends, 2006 and 2009E



Source: Company data, Kotak Institutional Equities estimates.

### Supplying to North America

We note that JSAW is the only linepipe manufacturer from India present in USA, enabling it to explicitly service its marquee client list of global energy majors. The company has 500,000 tons of annual capacity of LSAW and 1.2 mn ton steel plates in Texas through its affiliates (see Exhibit 41). We expect the US facility to contribute 36% of revenues in FY2009E compared to 35% in FY2006 (see Exhibit 40).

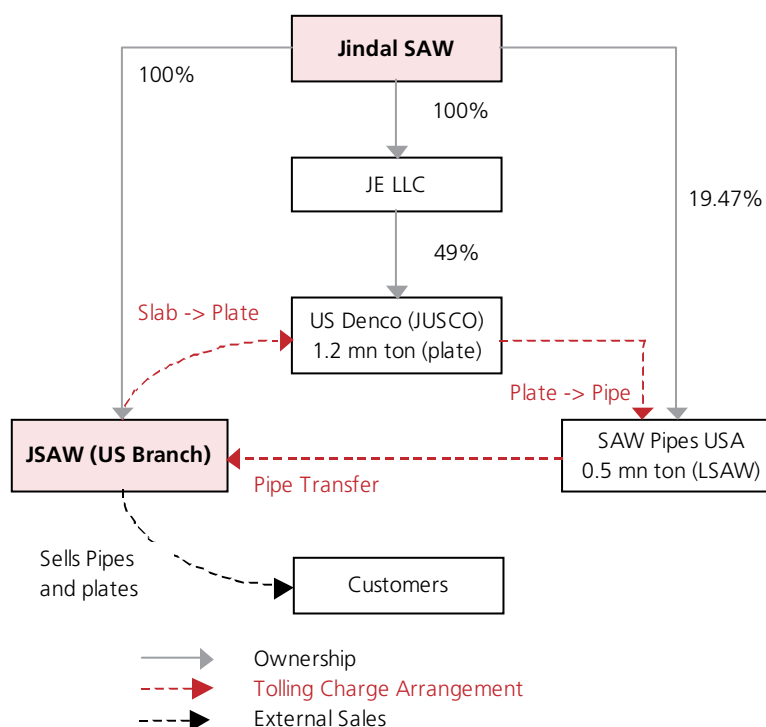
Exhibit 41: JSAW has significant plate and LSAW capacities in US through its affiliates  
Annual capacity of JSAW's US affiliates

Affiliate	Product	Capacity ('000 tons)
US Denro Steel Inc. (JUSCO)	Steel plates	1,200
SAW pipes USA Inc. (SPU)	LSAW pipe manufacturing	500

Source: Company data.

We note that JSAW has access to a high-grade plate conversion facility through its US affiliate (JUSCO), giving it a strong advantage in producing plates, which continue to be in short supply globally. JSAW further uses these plates to produce LSAW pipes in the US and sells plates in the open markets as well. We expect plate sales from the US branch to grow to Rs15.2 bn in FY2009E from Rs7.8 bn FY2006.

Exhibit 42: US affiliates are used for slab-plate-pipe conversion  
Structure of US operations of JSAW



Source: Company data, Kotak Institutional Equities.

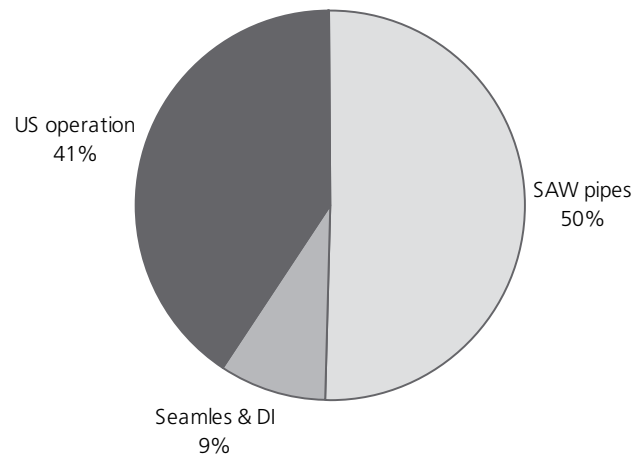
## Significant player in water projects—offering a comprehensive range

We believe the increasing focus on water infrastructure in the country will drive large investments in water and sewage pipelines. We expect this to generate significant demand for HSAW and DI pipes. JSAW is the only pipe producer in India providing complete water solutions through large diameter HSAW pipes, DI pipes and accessories. JSAW has recently increased its annual DI capacity to 260,000 tons through de-bottlenecking. We expect DI to contribute 6.7% of revenues in FY2009E compared to 7.1% in FY2006.

### Order book provides strong near-term visibility

Strong order book of US\$1.2 bn (1.0X its past 12 month revenue) provides strong near-term visibility for JSAW's growth. We note that the order book is dominated by export orders and that too mainly for linepipes (see Exhibit 43). Exports account for about 95% of the order book. We expect the order book to increase with upcoming gas pipeline projects in India and increasing demand from the Middle East and North America.

**Exhibit 43: US\$1.2 bn order book skewed towards linepipes**  
Order book break-up for JSAW



Source: Company data.

### Raw material security through group companies

JSAW is a part of the OP Jindal group, a leading player in the Indian steel industry. We note that the group through Jindal Steel and Power (JSPL) has recently commissioned a 1 mn ton plate mill and is further adding another wider-width 1.2 mn ton plate mill in CY2008 (see Exhibit 33). We believe this should increasingly improve the availability of steel plates for JSAW. We expect JSAW to consume 0.41 mn tons and 0.45 mn tons of steel plates at its India operations in FY2008E and FY2009E, respectively.

## Key risk: Likely competition from HSAW

**We believe upcoming HSAW capacities in USA can increase competition for LSAW in the North American market given the large pricing differential between the two. The upward revision of slab-to-pipe tolling charges paid to associates may adversely impact margins in the US operations.**

### Likely competition from upcoming HSAW capacities in USA

We believe LSAW could face competition in onshore applications from upcoming HSAW capacities in USA. We note that 1.5 mn tons of HSAW capacity is scheduled to get operational in USA over the next 2-3 years (see Exhibit 29). Nonetheless, we believe due to continued short supply and resultant higher prices of API grade steel plate, LSAW pipe prices may continue to rule higher, thus maintaining the large differential between HSAW and LSAW.

### Upward revision of tolling charges

We believe the upward revision in tolling charges paid by JSAW to get slabs converted to plates and LSAW pipes through its associates in USA may impact its US profitability. We note that its associates have been posting losses as understood from the recent annual reports. Tolling charges are scheduled to be revised sometime in CY2008. We model tolling charges paid as 34% of US sales in FY2008E and FY2009E.

### Subsidiary losses

JSAW subsidiaries have accumulated losses of Rs601 mn (FY2006 annual report). We believe the high accumulated losses at the subsidiary level pose a risk to the realisability of investment in those companies. The parent entity is not generating any cash flows from these companies and we believe its large investments in the companies could adversely impact valuations.

### Lower-than-expected volumes

We expect JSAW pipe volumes to grow at a CAGR of 23% over FY2006-09E. We expect JSAW to increase its exports sales and acquire a larger share of domestic orders. We expect capacity utilization to increase with new domestic capacities getting operational. Any delay in the order flow for these new capacities could adversely impact revenues and earnings growth.

## Financials—volume driven growth

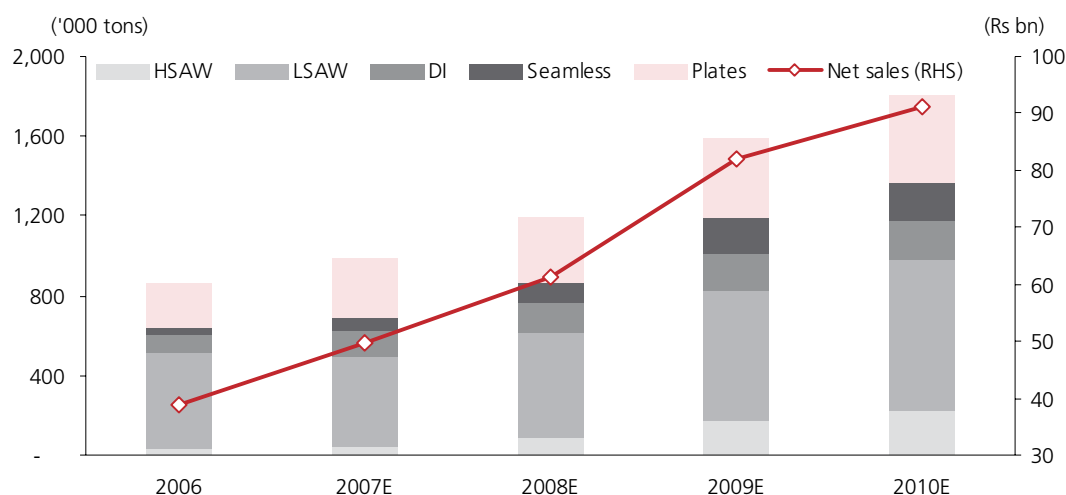
We expect strong volumes to drive revenues and earnings at a CAGR of 28.4% and 51.8%, respectively, over FY2006-09E; total pipe volumes will likely grow at a CAGR of 23% over the same period. We build increasing utilization levels, 55% in FY2009E from 37% in FY2006, following robust global demand for OCTG and linepipes from the oil & gas and water sectors. We expect higher utilization levels and realisations to increase EBITDA margins to 13% in FY2009E from 10.5% in FY2006.

### Strong domestic and global demand to drive volumes

We expect pipe volumes for JSAW to grow at a CAGR of 23% over FY2006-09E. We believe strong local and global demand for seamless and linepipes will drive capacity utilization for JSAW; expect total pipe utilization to increase to 55% in FY2009E from 37% in FY2006. We expect revenues to be driven by higher volumes and higher realisations during FY2006-09E. We expect revenues to increase at a CAGR of 28.4% over FY2006-09E.

**Exhibit 44: Strong growth in revenues as volumes grow**

Volumes segment wise and net sales, September fiscal year-ends, 2006-2010E



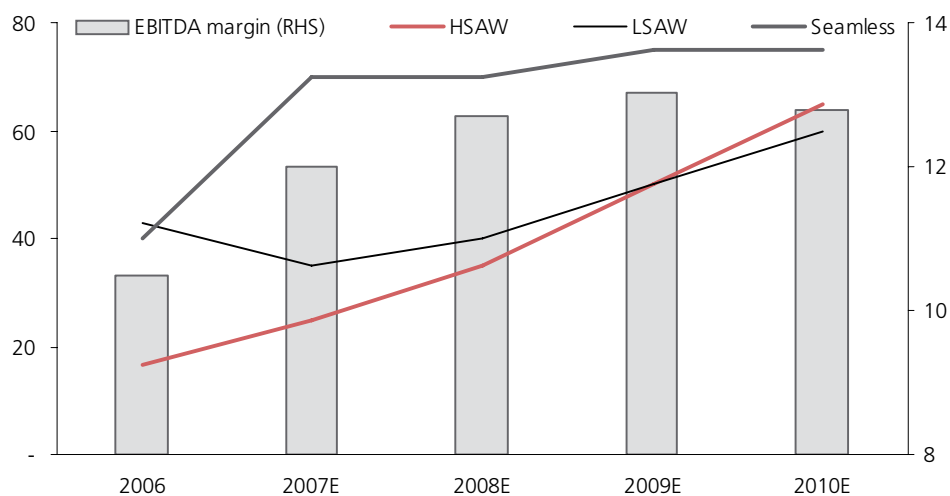
Source: Company data, Kotak Institutional Equities estimates.

### Higher capacity utilization and realisation to drive EBITDA margins

We expect JSAW's EBITDA margin to increase by 150 bps to 13% in FY2009E from 10.5% in FY2006. We believe better capacity utilization and higher realisations will be the key drivers driving EBITDA margin improvement (see Exhibit 45). The tight supply-demand balance will keep prices high up to CY2009, which we believe will further improve EBITDA margins. Process-related investments in sinter and power plants and de-bottlenecking of capacities will support margin expansions, in our view.

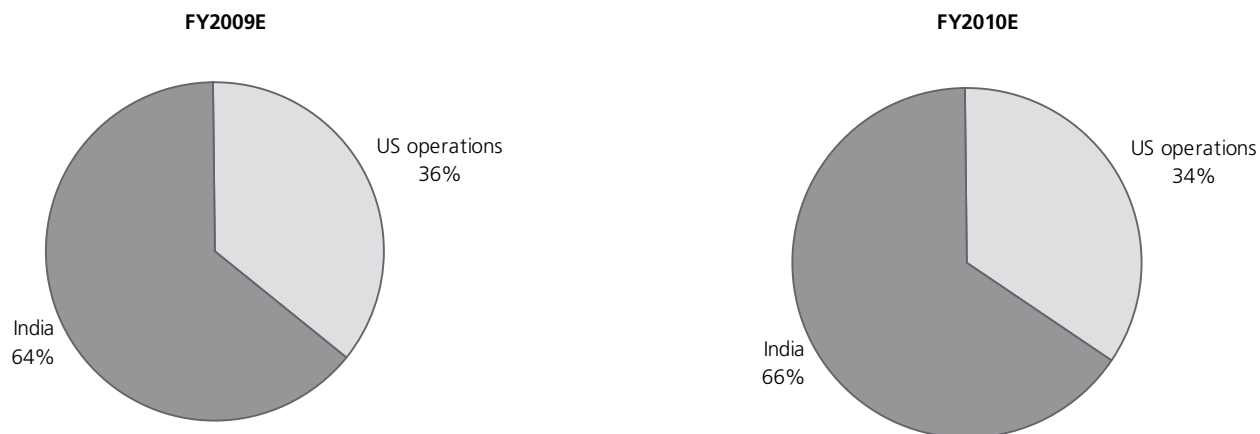
**Exhibit 45: EBITDA margins to improve with increasing capacity utilisation**

Capacity utilization for HSAW, LSAW and seamless and EBITDA margin, September fiscal year-ends, 2006-2010E (%)



Source: Company data, Kotak Institutional Equities estimates .

We believe the increasing proportion of export orders from the US and Middle East will keep EBITDA margins high for JSAW. We model marginally higher margins for the US facilities of JSAW. We expect the US to contribute to 36% and 34% of revenues in FY2009E and FY2010E, respectively (see Exhibit 46).

**Exhibit 46: Revenue break-up by geography**

Source: Kotak Institutional Equities estimates..



## Assumptions

Exhibit 47 illustrates our profit and loss model assumptions.

Exhibit 47: Profit and loss model assumptions, September fiscal year-ends, 2006-2010E

	2006	2007E	2008E	2009E	2010E
<b>Sales ('000 tons)</b>					
HSAW	25	38	88	175	228
LSAW	320	280	320	400	480
LSAW - USA	116	175	200	250	275
Seamless	40	70	96	188	188
DI	91	130	156	182	195
Plates (a)	218	300	334	402	436
<b>Realisation (US\$/ton)</b>					
HSAW	960	1,094	1,204	1,216	1,192
LSAW	1,075	1,225	1,348	1,361	1,334
LSAW - USA	1,266	1,443	1,515	1,530	1,499
Seamless	1,217	1,339	1,366	1,379	1,379
DI	716	752	770	786	786
Plates	805	886	930	930	916
<b>Raw material cost (US\$/ton)</b>					
HR coil	650	670	710	724	717
Plates	738	792	855	873	864
Slab	530	543	565	582	576
Billets	565	574	585	597	606
Iron ore	69	70	72	73	74
Coke	90	92	93	95	97

Note:

(a) Plate sales is net of plates consumed for pipe making in USA

Source: Company, Kotak Institutional Equities estimates.

Exhibit 48: Profit and loss model for Jindal Saw (consolidated), September fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007E	2008E	2009E	2010E
<b>Net revenues</b>	<b>10,856</b>	<b>23,138</b>	<b>38,731</b>	<b>49,620</b>	<b>61,107</b>	<b>81,897</b>	<b>91,034</b>
<b>Operating expenses</b>							
Stock adjustment	702	1,904	3,174	—	—	—	—
Raw materials	(7,601)	(17,809)	(27,282)	(30,806)	(37,752)	(50,836)	(57,126)
Manufacturing expense	(1,772)	(2,794)	(7,051)	(8,852)	(10,512)	(13,548)	(14,713)
Employee costs	(253)	(411)	(838)	(908)	(1,176)	(1,600)	(1,812)
Selling expenses	(395)	(950)	(2,285)	(2,605)	(3,361)	(4,504)	(5,007)
Other expenses	(190)	(277)	(384)	(496)	(550)	(737)	(728)
<b>Total expenditure</b>	<b>(9,509)</b>	<b>(20,336)</b>	<b>(34,666)</b>	<b>(43,667)</b>	<b>(53,350)</b>	<b>(71,225)</b>	<b>(79,386)</b>
<b>EBITDA</b>	<b>1,347</b>	<b>2,802</b>	<b>4,066</b>	<b>5,953</b>	<b>7,757</b>	<b>10,671</b>	<b>11,648</b>
<i>EBITDA margin (%)</i>	12.4	12.1	10.5	12.0	12.7	13.0	12.8
Net finance cost	(408)	(985)	(1,290)	(1,121)	(1,063)	(907)	(538)
Other income	68	105	144	70	75	75	75
<b>PBDT</b>	<b>1,006</b>	<b>1,923</b>	<b>2,920</b>	<b>4,902</b>	<b>6,769</b>	<b>9,840</b>	<b>11,186</b>
Depreciation and amortisation	(230)	(365)	(537)	(697)	(906)	(1,048)	(1,048)
<b>Pretax profits before extra-ordinaries</b>	<b>777</b>	<b>1,558</b>	<b>2,383</b>	<b>4,205</b>	<b>5,862</b>	<b>8,792</b>	<b>10,137</b>
Exceptional items	6	(56)	137	—	—	—	—
<b>Profit before tax</b>	<b>783</b>	<b>1,501</b>	<b>2,520</b>	<b>4,205</b>	<b>5,862</b>	<b>8,792</b>	<b>10,137</b>
Current tax	(190)	(370)	(694)	(1,177)	(1,583)	(2,418)	(3,143)
FBT	—	(4)	(10)	(15)	(18)	(20)	(25)
Deferred tax	(25)	(133)	(164)	(252)	(410)	(571)	(303)
Minority / associate earnings	—	—	2	—	—	—	—
Reported net profit	<b>568</b>	<b>994</b>	<b>1,653</b>	<b>2,761</b>	<b>3,852</b>	<b>5,783</b>	<b>6,667</b>
<b>Adjusted net profit</b>	<b>564</b>	<b>1,032</b>	<b>1,563</b>	<b>2,761</b>	<b>3,852</b>	<b>5,783</b>	<b>6,667</b>
Primary EPS (using wtd. avg. shares)	14.5	26.2	30.8	51.4	67.4	101.9	118.1
Diluted EPS	14.5	21.3	29.5	47.9	67.4	101.9	118.1
Year end no. of shares (mn)	39.0	47.1	48.4	56.0	56.0	56.0	56.0
Weighted avg. no. of shares (mn)	39.0	39.2	48.3	52.2	56.0	56.0	56.0
Fully diluted no. of shares (mn)	39.0	48.4	50.5	56.0	56.0	56.0	56.0
<b>Margins (%)</b>							
EBITDA margin	12.4	12.1	10.5	12.0	12.7	13.0	12.8
PBT margin	7.2	6.7	6.2	8.5	9.6	10.7	11.1
Net profit margin (w/o extraordinary)	5.2	4.5	4.0	5.6	6.3	7.1	7.3
Effective tax rate (%)	27.4	33.8	34.5	34.3	34.3	34.2	34.2
<b>Growth yoy (%)</b>							
Revenues	—	113.1	67.4	28.1	23.1	34.0	11.2
EBITDA	—	108.0	45.1	46.4	30.3	37.6	9.2
PBT	—	100.5	53.0	76.5	39.4	50.0	15.3
Net profit (w/o extraordinary)	—	83.0	51.5	76.6	39.5	50.2	15.3
Diluted EPS	—	47.2	38.4	62.6	40.7	51.2	15.9

Source: Company data, Kotak Institutional Equities estimates.

## Cash flow—FCF positive in FY2008E

We model JSAW to spend Rs5.7 bn in the period FY2006-2009E and expect the company to generate Rs16.2 bn of operating cash flows (before working capital) over the same period. The capex includes Rs3.8 bn of capex for increasing HSAW and seamless capacities in India.

Exhibit 49: JSAW plans to spend Rs4.5 bn over the next two years to expand capacities  
Proposed capex schedule for JSAW

Project	Cost (Rs mn)	Capacity	Start date
Seamless Plant	3,000	150,000 MTPA	Jul-08
HSAW pipe	750	200,000 MTPA	Mar-08
Power plant	750	15 MW	Dec-07
<b>Total</b>	<b>4,500</b>		

Source: Company data.

Exhibit 50: Cash flow model for Jindal Saw (consolidated), September fiscal year-ends, 2004-2010E  
(Rs mn)

	2004	2005	2006	2007E	2008E	2009E	2010E
<b>Operating</b>							
Pre-tax and pre Extraordinary	777	1,558	2,383	4,205	5,862	8,792	10,137
Depreciation & amortization	230	365	537	697	906	1,048	1,048
Taxes paid	(341)	(300)	(253)	(1,192)	(1,601)	(2,438)	(3,168)
Dividend and other income	(143)	(165)	(289)	(70)	(75)	(75)	(75)
Interest expense	365	816	1,309	1,121	1,063	907	538
Interest paid	(314)	(880)	(1,446)	(1,121)	(1,063)	(907)	(538)
Foreign exchange loss/(gain)	—	33	(22)	—	—	—	—
Extraordinary	6	(56)	137	—	—	—	—
Other non-cash items	9	1	18	157	—	—	—
Working capital changes	(1,060)	(6,135)	(2,231)	(1,823)	(1,230)	(2,337)	(1,671)
<b>Cash flow from operations</b>	<b>(472)</b>	<b>(4,764)</b>	<b>144</b>	<b>1,974</b>	<b>3,863</b>	<b>4,990</b>	<b>6,272</b>
<b>Operating, excl. working capital</b>	<b>588</b>	<b>1,371</b>	<b>2,375</b>	<b>3,797</b>	<b>5,093</b>	<b>7,327</b>	<b>7,943</b>
<b>Investing</b>							
Capital investment	(2,997)	(2,114)	(2,851)	(3,188)	(2,240)	(270)	(366)
Purchase/ sale of assets/ business	6	6	35	—	—	—	—
Investment changes	29	(94)	345	—	—	—	—
Advances to subsidiary	—	—	—	—	—	—	—
Interest/dividend received	154	177	351	70	75	75	75
<b>Cash flow from investing</b>	<b>(2,807)</b>	<b>(2,025)</b>	<b>(2,120)</b>	<b>(3,118)</b>	<b>(2,165)</b>	<b>(195)</b>	<b>(291)</b>
<b>Financing</b>							
Share capital	—	3,730	489	1,049	—	—	(300)
Net proceeds from borrowings	3,479	4,349	4,190	(1,551)	(1,213)	(4,277)	(638)
Effect of forex changes	—	—	—	—	—	—	—
Dividends paid (incl. tax)	(108)	(109)	(308)	(276)	(485)	(518)	(518)
<b>Cash flow from financing</b>	<b>3,370</b>	<b>7,970</b>	<b>4,371</b>	<b>(778)</b>	<b>(1,698)</b>	<b>(4,795)</b>	<b>(1,455)</b>
Net chg in CCE	91	1,182	2,395	(1,922)	—	-	4,526—
Beginning cash	253	345	1,526	3,922	2,000	2,000	2,000
<b>Ending cash</b>	<b>345</b>	<b>1,526</b>	<b>3,922</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>6,526</b>
Discretionary cash flow	(17)	1,073	2,088	(2,198)	(485)	(518)	4,008
<b>Free cash flow</b>	<b>(3,577)</b>	<b>(6,987)</b>	<b>(3,014)</b>	<b>(1,490)</b>	<b>1,138</b>	<b>4,202</b>	<b>5,388</b>

Source: Company data, Kotak Institutional Equities estimates.

### Balance sheet—RoE set to get better; debt-equity to remain low

We expect the RoAE of JSAW to improve to 25.1% in FY2009E from 15.3% in FY2006 as asset turnover and net profit margins increase. We expect debt-equity to drop to 0.3X in FY2009 from 1.1X in FY2006; we note this is quite healthy as the leverage risk remains low at the peak of the cycle.

Exhibit 51: Balance sheet model for Jindal Saw (consolidated), September fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007E	2008E	2009E	2010E
<b>Equity</b>							
Share capital	390	471	484	560	560	560	560
Convertible warrants	—	—	117	—	—	—	—
Reserves (excl Reval)	3,035	6,451	8,031	14,899	18,192	23,416	29,518
<b>Net worth</b>	<b>3,424</b>	<b>6,922</b>	<b>8,631</b>	<b>15,459</b>	<b>18,752</b>	<b>23,976</b>	<b>30,078</b>
Preference capital	—	1,000	1,000	1,000	1,000	1,000	700
Minority interest	—	—	151	151	151	151	151
Deferred tax liability	466	599	763	1,015	1,425	1,995	2,298
<b>Debt</b>	<b>7,630</b>	<b>11,979</b>	<b>16,217</b>	<b>11,121</b>	<b>9,908</b>	<b>5,631</b>	<b>4,994</b>
Secured	5,511	6,713	8,679	7,128	5,915	1,638	1,000
Unsecured	2,119	5,266	7,539	3,994	3,994	3,994	3,994
Current liability and provisions	6,437	5,012	12,303	14,264	17,216	22,602	25,067
<b>Total capital</b>	<b>17,958</b>	<b>25,512</b>	<b>39,066</b>	<b>43,011</b>	<b>48,451</b>	<b>55,356</b>	<b>63,288</b>
<b>Assets</b>							
Cash and cash equivalents	345	1,526	3,922	2,000	2,000	2,000	6,526
Inventory	4,518	9,262	13,967	16,314	19,253	23,559	26,188
Sundry debtors	4,104	3,335	7,608	8,836	10,045	13,462	14,965
Loans and advances	2,093	2,658	2,480	2,480	2,480	2,480	2,480
<b>Current assets</b>	<b>11,060</b>	<b>16,782</b>	<b>27,976</b>	<b>29,630</b>	<b>33,778</b>	<b>41,502</b>	<b>50,158</b>
Gross block (net off revaluation)	5,091	8,633	11,049	13,584	18,024	18,295	18,660
Less: Accumulated depreciation	1,573	1,980	2,499	3,238	4,186	5,276	6,366
Net fixed assets	3,518	6,653	8,550	10,346	13,838	13,019	12,294
Capital -WIP	2,350	1,177	1,546	2,200	—	—	—
Pre-operative exp	167	32	158	—	—	—	—
<b>Net fixed assets (incl. C-WIP &amp; Pre-op)</b>	<b>6,035</b>	<b>7,862</b>	<b>10,254</b>	<b>12,546</b>	<b>13,838</b>	<b>13,019</b>	<b>12,294</b>
Investments	862	868	836	836	836	836	836
Miscellaneous expenditure	—	1	—	—	—	—	—
<b>Total assets</b>	<b>17,958</b>	<b>25,512</b>	<b>39,066</b>	<b>43,011</b>	<b>48,451</b>	<b>55,356</b>	<b>63,288</b>
<b>Leverage and return ratios (x)</b>							
Debt/Equity	2.0	1.7	1.1	0.7	0.5	0.3	0.2
Debt/Capitalisation	0.7	0.6	0.5	0.4	0.4	0.2	0.2
Net debt/Equity	1.9	1.5	0.8	0.6	0.4	0.2	(0.0)
Net debt/Capitalisation	0.7	0.6	0.4	0.4	0.3	0.2	(0.0)
Net debt/EBITDA	5.4	4.1	2.4	1.7	1.2	0.4	(0.1)
ROAE (%)	14.5	18.1	15.3	18.8	21.0	25.1	22.9
ROACE (%)	7.5	10.5	10.2	12.6	15.2	19.9	19.8

Source: Company data, Kotak Institutional Equities estimates.

## Company profile: All-pipes player

JSAW is a part of the OP Jindal group, a leading player in the Indian steel industry. JSAW is the only Indian linepipe player from our universe with capacities in the DI and seamless segments. We note that JSAW is one of the leading linepipe manufacturers from India in the export markets, with exports accounting for 65% of revenues in FY2006. Exports account for 90% of its \$1.2 bn current order book.

## Capacities across segments, leading domestic LSAW player

JSAW leads the domestic LSAW pipe market with its 0.8 mn capacity, which is about 50% of the total domestic capacity. The company has recently increased its DI capacity through de-bottlenecking to 260,000 tons from 200,000 tons. Apart from its own capacities in India, JSAW has access to steel plate and LSAW capacities in USA.

Exhibit 52: JSAW has capacities across various pipe segments  
Jindal Saw existing pipe capacities and locations

Pipe	Capacity (TPA)	Location
LSAW	250,000	Kosi
LSAW	550,000	Mundra
LSAW (a)	500,000	Texas, USA
<b>LSAW total</b>	<b>1,300,000</b>	
HSAW	150,000	Mundra
Seamless	100,000	Nashik
Ductile iron (b)	200,000	Mundra
<b>Total pipe</b>	<b>1,750,000</b>	
Steel plates(c)	1,200,000	Texas, USA

Notes:

(a) JSAW has 19.4% stake

(b) This is the current rated capacity

(c) JSAW has 49% stake

Source: Company data.

## Subsidiaries and associates

Exhibit 53 illustrates the various subsidiaries and associates with the respective holding of JSAW and business activities.

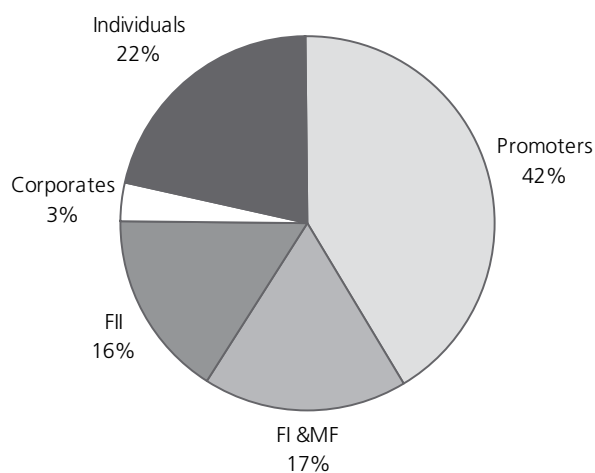
Exhibit 53: Subsidiaries and associates of JSAW

Entity	Relation	% Owned	Business
Hexa Securities and Finance Ltd.	Subsidiary	100	Investment
Jindal Enterprises LLC	Subsidiary	100	Stainless Steel processing
IUP-Jindal	Joint Venture	73	Cold rolling stainless steel
US Denro Steel Inc. (JUSCO)	Associate	49	Plate manufacturing
SAW pipes USA Inc. (SPU)	Investment	19	LSAW pipe manufacturing

Source: Company data.

## Shareholding pattern

Exhibit 54: JSAW shareholding pattern as of 30 June 2007



Source: BSE.

### Company data and valuation summary

Company data	Stock data	High	Low	Price performance	1M	3M	12M
Rating: Outperform	52-week range (Rs)	728	250	Absolute (%)	(2.3)	24.9	157.5
	Yield (%)		0.9	Rel. to BSE-30 (%)	(4.2)	17.2	118.6
<b>Current price (Rs)</b> 672	Priced at close of:	August 1, 2007					
	<b>Capitalization</b>			<b>Forecasts/valuation</b>	<b>2006</b>	<b>2007E</b>	<b>2008E</b>
	Market cap (Rs bn)		37.6	EPS (Rs)	29.5	47.9	67.4
	Net debt/(cash) (Rs mn)		10,273	P/E (X)	22.8	14.0	10.0
	Free float (%)		50.6	RoAE (%)	15.3	18.8	21.0
	Shares outstanding (mn)		56.0	EV/EBITDA (X)	10.8	8.0	6.0

Source: Bloomberg, Kotak Institutional Equities estimates.







August 2, 2007

**INITIATING COVERAGE**

Coverage view: **Attractive**

Price: **Rs333**

Target price: **Rs420**

BSE-30: **14,936**

**Ready to ride the tide.** We believe PSL is well placed to make the most from the increasing demand transition towards HSAW pipes. PSL is the leader amongst Indian HSAW linepipe manufactures with a 60% domestic capacity share and presence in the high demand UAE market. We expect increasing capacity utilization and higher realisations to drive margins and net earnings and expect net earnings to grow at a CAGR of 54% over FY2007-10E. We initiate coverage with an Outperform rating and target price of Rs420.

#### Valuations set to improve further; initiate with Outperform

We believe strong growth in revenues and earnings will improve valuations for PSL—currently trading at 8.1X FY2009E earnings and 5.9X FY2009E EBITDA. Our 12-month DCF-based target price of Rs420 is based on 12.5% WACC and 1% terminal growth rate. We expect EBITDA margin and capacity utilization for PSL to increase to 11.8% and 36%, respectively, in FY2009E (see Exhibit 62).

#### Large movable capacities; expanding into high-demand areas—US, Middle East

We believe PSL's large and flexible capacities enable it to service export and domestic orders efficiently. Following the increasing global acceptance and consequent demand for HSAW, PSL is expanding its global presence—it recently started a 75,000 ton capacity in UAE and is setting up a 300,000 ton capacity in USA (to be operational in 1QFY09).

#### Revenues and earnings to grow at 34.6% and 54.4% CAGR over FY2007-10E

We expect revenues and PAT to grow at a CAGR of 34.6% and 54.4%, respectively, over FY2007-10E. We expect strong volume growth and margin improvement from better capacity utilization to drive revenues and earnings. We expect utilization levels to improve to 47% in FY2010E from about 23% in FY2007 as volumes follow the increasing global demand for spiral linepipes (see Exhibit 62).

#### Key risk—high domestic dependency; lack of meaningful export orders

We note that PSL's current order book is skewed towards domestic orders—about 75% of the current order book of Rs21 bn (see Exhibit 59). Though the company is exporting to the Middle East, we believe the absence of orders from North American market in the long term may adversely impact its volume growth and forthcoming US operations.

#### Forecasts and valuation (consolidated)

March year-end	Sales (Rs mn)	EBITDA (Rs mn)	Adj. PAT (Rs mn)	EPS (Rs)	RoAE (%)	P/E (X)	EV/EBITDA (X)
2006	14,503	1,577	519	17.3	22.6	23.6	11.3
2007E	14,815	1,556	683	21.2	20.8	20.2	12.0
2008E	20,015	2,267	1,043	27.6	20.5	13.2	8.4
2009E	28,067	3,315	1,702	41.1	23.9	8.1	5.9
2010E	36,134	4,284	2,403	58.0	27.1	5.7	4.3

Source: Company data, Kotak Institutional Equities estimates.

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Kotak Institutional Equities  
Research

Important disclosures appear  
at the back of this report.

## Valuation: DCF-based target price of Rs420

Our 12-month DCF-based target price for PSL is Rs420. We expect EBITDA margin and capacity utilization for PSL to increase to 11.8% and 36%, respectively, in FY2009E. We believe strong growth in revenues and earnings will improve valuations for PSL—currently trading at 8.1X FY2009E earnings and 5.9X FY2009E EBITDA. At our target valuation, the FY2009E earnings and EBITDA multiple will be 10.2X and 6.8X, respectively. The exit EV/EBITDA multiple at our target valuation is 5.5X.

### DCF-based valuation of Rs420/share

Exhibit 55: Our DCF-based target for PSL is Rs420/share  
DCF-based valuation for PSL (Rs mn)

	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	Terminal Value
EBITDA	2,267	3,315	4,284	4,603	4,129	4,165	4,131	4,090	4,090	4,090	
Tax expense	(470)	(759)	(866)	(859)	(705)	(662)	(694)	(696)	(716)	(672)	
Changes in working capital	(1,128)	(1,880)	(1,691)	(453)	373	(85)	298	195	—	—	
Cash flow from operations	668	676	1,727	3,290	3,796	3,417	3,735	3,589	3,374	3,418	
Capital expenditure	(2,307)	(771)	(137)	(139)	(141)	(190)	(194)	(248)	(254)	(520)	
Free cash flow to the firm	(1,639)	(95)	1,590	3,152	3,656	3,227	3,541	3,341	3,120	2,897	25,446
Discounted cash flow-now	(1,516)	(78)	1,162	2,047	2,111	1,656	1,615	1,355	1,125	928	
Discounted cash flow-1 year forward	—	(88)	1,307	2,303	2,375	1,863	1,817	1,524	1,265	1,044	
Discounted cash flow-2 year forward	0.0%	—	1,471	2,591	2,671	2,096	2,044	1,715	1,424	1,175	
Discount rate	12.5%										
Growth from 2017 to perpetuity	1.0%										
Discount factor at WACC	0.92	0.82	0.73	0.65	0.58	0.51	0.46	0.41	0.36	0.32	

	+ 1-year	+ 2-years		
Total PV of free cash flow (a)	13,412	59%	15,187	60%
PV of terminal value (b)	9,173	41%	10,319	40%
EV (a) + (b)	22,584		25,506	
EV (US\$ mn)	558		630	
Net debt	5,290		5,826	
Equity value	17,295		19,680	
No. of shares	41.4		41.4	
Implied share price (Rs)	417		475	
Exit EV/EBITDA multiple (X)	5.5			
Exit FCF multiple (X)	7.7			

Sensitivity of DCF value to WACC and growth rate (Rs)						
Growth Rate	WACC					
	11.5%	12.0%	12.5%	13.0%	13.5%	
	-0.5%	436	411	389	368	348
	0.0%	447	421	398	376	355
	0.5%	459	432	407	384	363
	1.0%	472	443	417	393	371
	1.5%	487	456	428	403	380
	2.0%	503	470	441	414	389
	2.5%	520	486	454	426	400

Source: Kotak Institutional Equities estimates.

## Pessimistic scenario also leaves a lot of upside

Exhibit 56 illustrates potential valuations in several hypothetical scenarios. Even our pessimistic scenario suggests an upside of 17.7%. More benign combinations of realisations (5% lower than assumed) and raw material prices (5% lower than assumed) lead to lower valuations. Our optimistic scenario assumes 5% higher realisations and similar raw material prices as in our assumed case.

Exhibit 56: Share price is highly sensitive to price movements  
Sensitivity of DCF value to various pricing levels

Scenario	DCF value (Rs/share)	Scenario assumptions
Pessimistic	392	Realisation and raw material cost lower by 5%
Assumed	417	Our base case assumptions
Optimistic	616	Realisation up 5%, raw material cost as in assumed case

Source: Kotak Institutional Equities estimates.

## Large re-locatable capacities; expanding to high-demand areas

We believe PSL's large and re-locatable capacities enable it to service export and domestic orders efficiently. Following the increasing global acceptance and demand for HSAW, PSL is expanding its global presence. The company recently started a 75,000 tpa capacity in UAE and is currently setting up a 300,000 tpa capacity in USA (to be operational in 1QFY09). We expect increasing export orders and volumes from UAE and USA to drive volumes and margins for PSL.

### India capacities—large, multiple, re-locatable, strategic-port-based

We believe one of PSL's strongest advantages is its large multi-location and re-locatable capacities through which it can service domestic and exports orders efficiently (see Exhibit 57). We believe its strategic locations near the demand centres and ports make its plants easily accessible for its customers at relatively low freight costs. The company has recently moved one of its plants from Ahmedabad to Jaipur to cater to the growing water and gas pipeline demand in Rajasthan. We believe this facility could garner orders from Cairn's planned pipeline of 585 km (worth US\$700 mn). Further, we expect PSL to relocate another of its plants near to the KG basin in case orders are received from any of the gas producers in that region.

Exhibit 57: Multi-locational, flexible, port based capacities  
PSL existing and upcoming capacities, (tons)

Location	Plant type	No. of plants	Total capacity tons/annum
<b>Existing</b>			
Varsana	HSAW	4	300,000
Nanichirai	HSAW	1	75,000
Ahmedabad	HSAW	1	75,000
Jaipur	HSAW	1	75,000
Chennai	HSAW	1	75,000
Vizag	HSAW	2	150,000
Varsana	HTS-SAW	1	350,000
UAE	HSAW	1	75,000
<b>Total</b>		<b>12</b>	<b>1,175,000</b>
	Sacrificial nodes	4 Furnaces	5,000
	Welded steel wire mesh	1 Plant	1.5 mn sq mtr
	Fibre glass outer wrap	1 Plant	3.0 mn sq mtr
<b>Under construction</b>			
USA (a)	HTS-SAW	1	300,000

Note:

(a) 75% JV with A&L group in USA

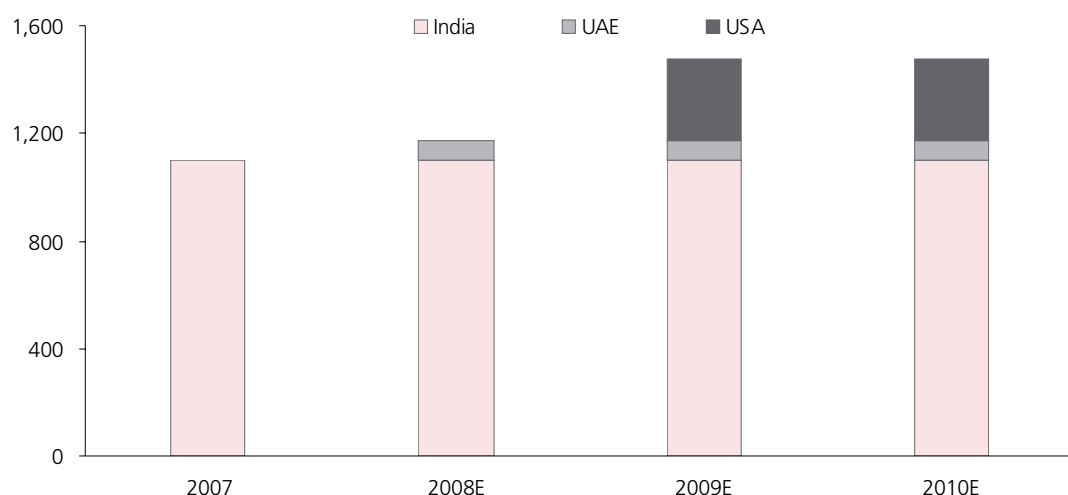
Source: Company data.

### Expanding in high-demand locations around the world

PSL has recently set up a 75,000 tpa HSAW capacity in UAE, a high demand region for linepipes. Apart from this, it is currently setting up 300,000 tpa capacity in USA in a JV with A&L Group which shall be operational by 1QFY09. We believe PSL's strategy to set up plants near high-demand locations will make it increasingly competitive due to savings on transportation costs and increasing its accessibility to the local markets.

**Exhibit 58: PSL expanding capacity globally**

PSL capacity by regions, March fiscal year-ends, 2007-2010E ('000 tons)



Source: Company data.

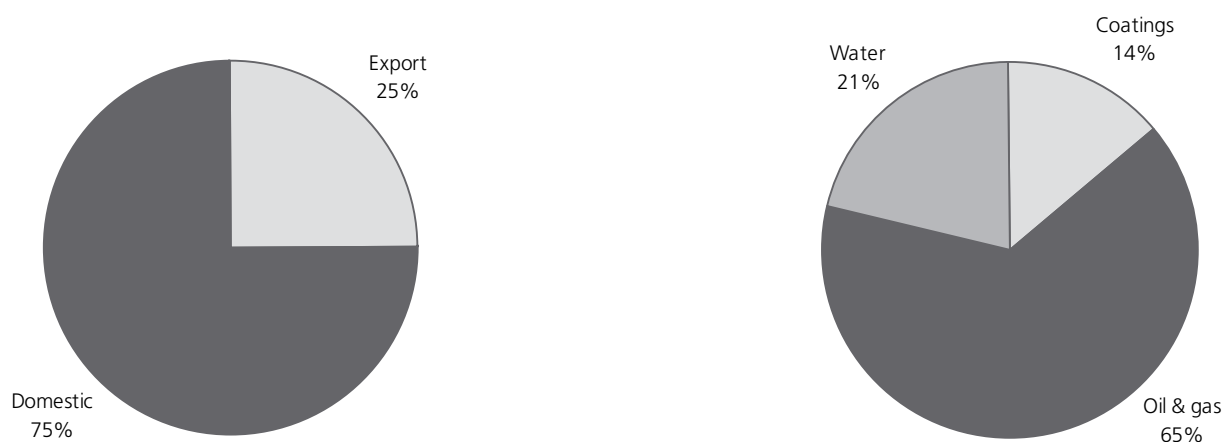
With the Middle East and North America expected to be the main demand centers over the next three years, we expect PSL to sell large volumes through these new plants. We expect US and UAE to contribute 16.8% and 21.5% of revenues (combined) in FY2009E and FY2010E, respectively (see Exhibit 63).

**Order book provides strong near-term visibility**

PSL's large order book of Rs21 bn (1.3X last 12 month revenues) provides strong near-term visibility for PSL's growth. We note that the order book is dominated by domestic orders and that too mainly for oil and gas (see Exhibit 21). Exports account for 25% of the order book. We expect order book to increase with the upcoming gas pipeline projects in India and increasing demand from Middle East and other regions.

**Exhibit 59: Rs21 bn order book skewed towards exports and oil and gas**

Break up of current order book



Source: Company data.

### Significant player for water projects

We believe the increasing focus on water infrastructure in India will drive large investments in water and sewage pipelines. We expect this to generate significant demand for HSAW pipes as large diameter linepipe requirement for water needs HSAW and not DI/CI pipes. PSL is a strong player in this segment and has worked with L&T and ECC for water linepipes in the recent past.

### In-house design and engineering facilities keep capital costs low

We believe PSL is able to create capacities at a lower cost than its peers mainly on account of its own in-house design and engineering facilities for developing equipment for pipe manufacturing and pipe coating. We believe this skill makes it possible for PSL to relocate its mills near to demand locations, thus providing it great competitive edge over its peers. Apart from using this skill for its own facilities, PSL executes pipe mill orders for other players. It executed an order to design and set up a pipe mill in Kazakhstan for an LN Mittal group company in FY2006. PSL is currently setting up its US facility on its own and we expect its lower investment compared to other players to keep its return ratios comparably high.

#### Exhibit 60: PSL has very low per ton capex as compared to peers

Recent capacity additions by domestic players

Company	Description	Technology	Completion	Capacity tpa	Cost Rs/ton
Welspun	490 TMT, Anjar	HSAW/ERW	Nov '05	490,000	4,915
Man Industries	250 TMT, Anjar	LSAW/HSAW	Mar '05	250,000	6,307
PSL	350 TMT, Kandla	HSAW	FY2006	350,000	2,857
PSL	75 TMT, Vizag	HSAW	FY2006	75,000	2,000

Source: Company data.

## Key risks: High domestic dependency, single product

**We note that PSL's current order book is skewed towards domestic orders—roughly 75% of the current order book of Rs21 bn. Although the company is exporting to the Middle East, we believe the absence of orders from the North American market for the long term may adversely impact its volume growth and the upcoming US operations. The single product portfolio restricts participation to the onshore linepipe demand.**

### High domestic dependency

We note that PSL is a strong player in the domestic market and has low exposure to the international market. Further, we note that the present order book is skewed towards domestic market (75% of the order book). Within exports, the company has been mainly exporting to Middle East. We believe its inability to acquire export orders could severely impact its volumes and earnings as domestic projects have a high probability of getting delayed. However, we believe with the recently-set-up UAE capacity and the upcoming US capacity, PSL's domestic dependency will reduce over FY2007-2010E. We expect USA and UAE together to contribute 16.8% and 21.5% of revenues in FY2009 and FY2010E, respectively (see Exhibit 63).

### Single product offering

We believe PSL's single product offering (HSAW) restricts its participation to onshore linepipe demand. We note that though HSAW is gaining acceptance, there are certain applications—offshore and high pressure—where LSAW cannot be substituted. We believe demand for such requirements to remain nearly half of the total linepipe demand.

### Lower-than-expected volumes

We expect PSL volumes to grow at a CAGR of 40.1% over FY2007-10E. We expect PSL to increase its exports sales and acquire larger share of domestic orders. We expect capacity utilization to increase with UAE and US plant getting operational. Any delay in the order flow for these new capacities could adversely impact growth in revenues and earnings.

## Financials—strong volume growth to drive earnings

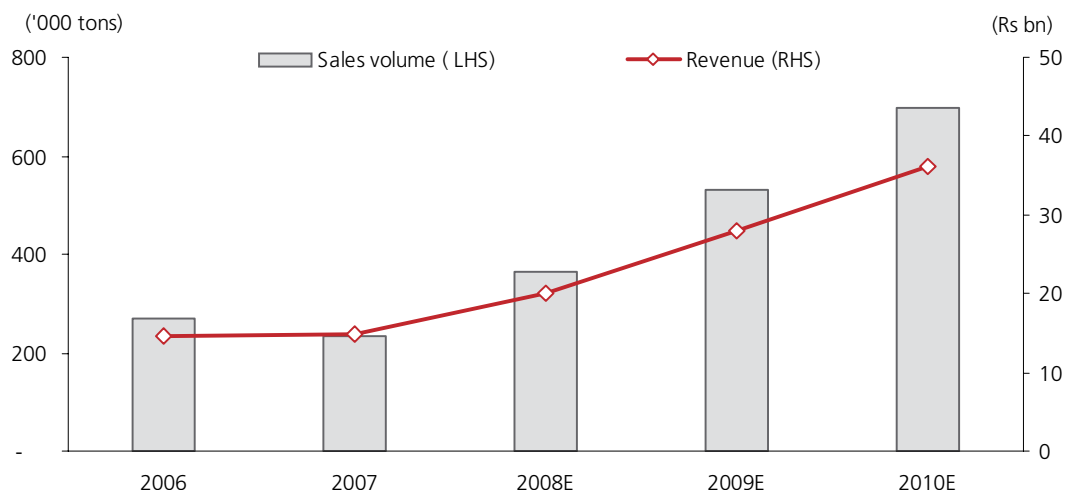
We expect strong volumes to drive revenues and earnings at a CAGR of 34.6% and 54.4%, respectively, over FY2007-10E; volumes are expected to grow at a CAGR of 40% over the same period. We build increasing utilization levels—47% in FY2010E from 23% in FY2007—following strong global demand for HSAW pipes from oil & gas and water sectors. We expect higher utilization levels and realisations to increase EBITDA margin to 11.9% in FY2010E from 10.5% in FY2007.

### Strong domestic and global demand to drive volumes

We expect volumes for PSL to grow at a CAGR of 40% over FY2007-10E. We believe strong local and global demand for HSAW pipes will drive capacity utilization for PSL; we expect utilization to increase to 47% in FY2010E from 23% in FY2007. We expect revenues to be driven by higher volumes and realisations during FY2007-09E. We expect revenues to increase at a CAGR of 34.6% over FY2007-10E.

**Exhibit 61: Strong revenue growth with increasing volumes**

Sales volume ('000 tons) and net revenues (Rs bn), March fiscal year-ends, 2006-2010E



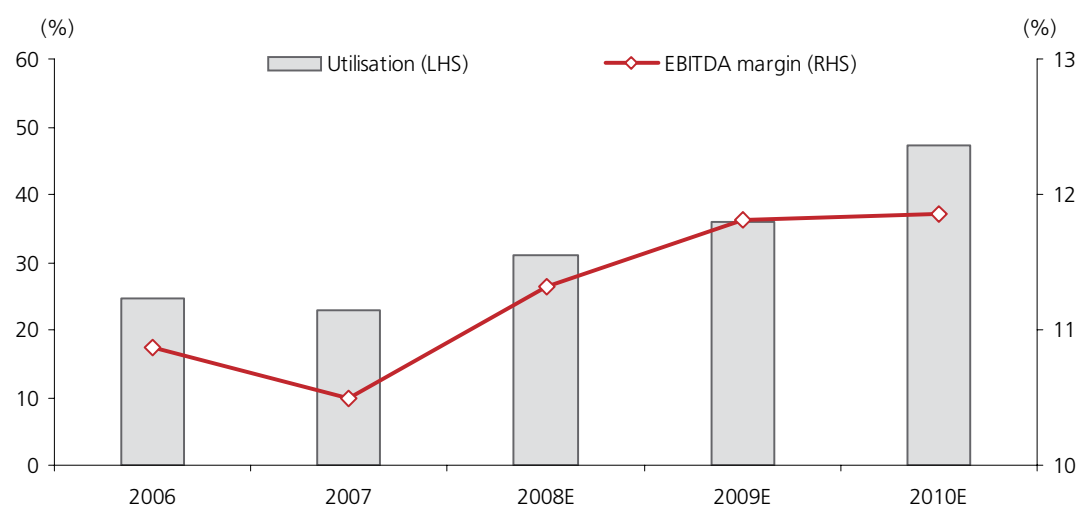
Source: Company data, Kotak Institutional Equities estimates.

### Higher capacity utilization and realisation to drive EBITDA margins

We expect PSL's EBITDA margin to increase by 140 bps to 11.9% in FY2010E from 10.5% in FY2007. We believe higher capacity utilization and higher realisations will be the key drivers driving EBITDA margin improvement (see Exhibit 62). PSL has created large capacities of HSAW over the past few years, which we believe will now be utilized to meet high linepipe demand. Tight supply-demand balance will push prices higher up to CY2009, which we believe will further drive up the EBITDA margin.

**Exhibit 62: EBITDA margin to improve with increasing capacity utilization**

Capacity utilization and EBITDA margin, March fiscal year-ends, 2006-2010E (%)



Source: Company data, Kotak Institutional Equities estimates.

We believe the increasing proportion of export orders and US and UAE volumes will further increase EBITDA margins of PSL. We model marginally higher margins for US and UAE facilities of PSL. We expect the US and UAE together to contribute to 16.8% and 21.5% of revenues in FY2009E and FY2010E, respectively (see Exhibit 63).

**Exhibit 63: USA and UAE to have an increasing share in total revenues**

Revenue split by geography (%)



Source: Kotak Institutional Equities estimates.



## Assumptions

Exhibit 64 illustrates our profit and loss model assumptions.

Exhibit 64: Revenue model assumptions, March fiscal year-ends, 2007-2010E

	2007	2008E	2009E	2010E
<b>Sales ('000 tons)</b>				
India	233	352	440	550
UAE		13	34	41
USA			56	105
<b>Realisation (US\$/ton)</b>				
India	1,074	1,170	1,194	1,211
UAE		1,250	1,275	1,294
USA			1,300	1,320
<b>Raw material cost (US\$/ton)</b>				
HR coil	652	708	718	726

Source: Kotak Institutional Equities estimates.

Exhibit 65: Profit and loss model for PSL (consolidated), March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007E	2008E	2009E	2010E
<b>Net revenues</b>	<b>8,347</b>	<b>14,092</b>	<b>14,503</b>	<b>14,815</b>	<b>20,015</b>	<b>28,067</b>	<b>36,134</b>
<b>Operating expenses</b>							
Change in stock	305	2,210	68	773	—	—	—
Raw materials consumed	(6,108)	(11,509)	(10,142)	(10,600)	(13,203)	(18,576)	(24,016)
Stores consumed	(278)	(743)	(465)	(512)	(666)	(779)	(945)
Manufacturing & process expense	(783)	(1,952)	(1,576)	(2,027)	(2,651)	(3,555)	(4,479)
Employee costs	(296)	(307)	(342)	(449)	(588)	(892)	(1,149)
Other expenses	(262)	(542)	(468)	(444)	(640)	(949)	(1,260)
<b>Total expenditure</b>	<b>(7,422)</b>	<b>(12,844)</b>	<b>(12,925)</b>	<b>(13,260)</b>	<b>(17,748)</b>	<b>(24,751)</b>	<b>(31,849)</b>
<b>EBITDA</b>	<b>925</b>	<b>1,248</b>	<b>1,577</b>	<b>1,556</b>	<b>2,267</b>	<b>3,315</b>	<b>4,284</b>
EBITDA Margin (%)	11.1	8.9	10.9	10.5	11.3	11.8	11.9
Net finance cost	(415)	(648)	(690)	(435)	(517)	(537)	(506)
Other income	189	170	193	274	197	285	375
<b>PBDT</b>	<b>700</b>	<b>770</b>	<b>1,080</b>	<b>1,395</b>	<b>1,946</b>	<b>3,064</b>	<b>4,153</b>
Depreciation and amortisation	(170)	(240)	(344)	(445)	(469)	(597)	(734)
Bad debt written off	(34)	(75)	(28)	—	(23)	(30)	(40)
<b>Pretax profits before extra-ordinaries</b>	<b>496</b>	<b>454</b>	<b>708</b>	<b>950</b>	<b>1,454</b>	<b>2,436</b>	<b>3,379</b>
Exceptional items	—	—	—	42	—	—	—
<b>Profit before tax</b>	<b>496</b>	<b>454</b>	<b>708</b>	<b>907</b>	<b>1,454</b>	<b>2,436</b>	<b>3,379</b>
Current tax	(114)	(102)	(184)	(255)	(344)	(619)	(750)
FBT	—	—	(8)	—	(12)	(15)	(25)
Deferred tax	(2)	(20)	3	—	(55)	(83)	(47)
Minority/associate earnings	—	—	—	—	—	(17)	(155)
Reported net profit	<b>380</b>	<b>333</b>	<b>519</b>	<b>652</b>	<b>1,043</b>	<b>1,702</b>	<b>2,403</b>
<b>Adjusted net profit</b>	<b>380</b>	<b>333</b>	<b>519</b>	<b>683</b>	<b>1,043</b>	<b>1,702</b>	<b>2,403</b>
Primary EPS	13.1	11.5	17.3	21.2	27.6	41.1	58.0
Diluted EPS	13.1	11.5	14.1	16.5	25.2	41.1	58.0
Year end no. of shares (mn)	29.1	29.1	32.1	34.2	41.4	41.4	41.4
Weighted avg. no. of shares (mn)	29.1	29.1	29.9	32.2	37.8	41.4	41.4
Fully diluted no. of shares (mn)	29.1	29.1	36.8	41.4	41.4	41.4	41.4
<b>Margins (%)</b>							
EBITDA margin	11.1	8.9	10.9	10.5	11.3	11.8	11.9
PBT margin	5.9	3.2	4.9	6.4	7.3	8.7	9.4
Net profit margin (w/o extra-ordinaries)	4.6	2.4	3.6	4.6	5.2	6.1	6.6
Effective tax rate (%)	23.3	26.7	26.7	28.1	28.3	29.4	24.3

Source: Company data, Kotak Institutional Equities estimates.

## Cash flows—FCF positive in FY2010E

We model PSL to spend Rs3.1 bn between FY2008-2009E and expect the company to generate Rs3.5 bn of operating cash flows (before working capital) over the same period. The capex includes Rs2.8 bn of capex for 300,000 tpa capacity in USA.

Exhibit 66: Cash flow model for PSL (consolidated), March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007E	2008E	2009E	2010E
<b>Operating</b>							
Pre-tax and pre extraordinary income	496	454	708	950	1,454	2,436	3,379
Depreciation & amortization	170	240	344	445	469	597	734
Taxes paid	(76)	(170)	(111)	(255)	(356)	(634)	(775)
Dividend and other income	(40)	—	(31)	(274)	(197)	(285)	(375)
Interest expense	278	313	484	435	517	537	506
Interest paid	(297)	(325)	(485)	(435)	(517)	(537)	(506)
Foreign exchange loss/(gain)	—	—	—	—	—	—	—
Extra-ordinary	(87)	(172)	—	(42)	—	—	—
Other non-cash items	—	—	(9)	—	—	—	—
Working capital changes	319	(2,179)	(1,267)	(62)	(1,128)	(1,880)	(1,691)
<b>Cash flow from operations</b>	<b>763</b>	<b>(1,837)</b>	<b>(367)</b>	<b>761</b>	<b>243</b>	<b>233</b>	<b>1,272</b>
<b>Operating, excl. working capital</b>	<b>444</b>	<b>342</b>	<b>900</b>	<b>823</b>	<b>1,371</b>	<b>2,114</b>	<b>2,963</b>
<b>Investing</b>							
Capital investment	(452)	(1,180)	(1,115)	(702)	(2,307)	(771)	(137)
Purchase/ sale of assets/ business	—	—	—	—	—	—	—
Investment changes	68	(56)	—	—	—	—	—
Advances to subsidiary	—	—	—	—	—	—	—
Interest/dividend received	59	12	41	274	197	285	375
<b>Cash flow from investing</b>	<b>(325)</b>	<b>(1,223)</b>	<b>(1,074)</b>	<b>(427)</b>	<b>(2,111)</b>	<b>(485)</b>	<b>238</b>
<b>Financing</b>							
Equity issues	—	—	698	435	—	270	—
Net proceeds from borrowings	60	4,429	320	(881)	2,061	249	(1,195)
Effect of forex changes	—	—	—	—	—	—	—
Dividends paid (incl. tax)	(234)	(187)	(174)	(86)	(193)	(267)	(315)
<b>Cash flow from financing</b>	<b>(174)</b>	<b>4,242</b>	<b>844</b>	<b>(532)</b>	<b>1,868</b>	<b>252</b>	<b>(1,510)</b>
Net change in CCE	264	1,182	(597)	(199)	—	—	—
Beginning cash	350	615	1,796	1,199	1,000	1,000	1,000
<b>Ending cash</b>	<b>615</b>	<b>1,796</b>	<b>1,199</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>	<b>1,000</b>
Discretionary cash flow	30	994	(771)	(286)	(193)	(267)	(315)
<b>Free cash flow</b>	<b>77</b>	<b>(3,204)</b>	<b>(1,656)</b>	<b>(27)</b>	<b>(2,257)</b>	<b>(804)</b>	<b>820</b>

Source: Company data, Kotak Institutional Equities estimates.

## Balance sheet—RoE set to get better

We expect RoAE of PSL to improve to 23.9% in FY2009E from 20.8% in FY2007 as asset turnover and net profit margins increase. We expect net debt-equity to drop to 0.9X in FY2009 from 1.3X in FY2007.

Exhibit 67: Balance sheet model for PSL (consolidated), March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007E	2008E	2009E	2010E
<b>Equity</b>							
Share capital	289	289	320	341	413	413	413
Reserves and surplus	1,534	1,536	2,458	3,437	5,987	7,422	9,509
<b>Net worth</b>	<b>1,823</b>	<b>1,825</b>	<b>2,777</b>	<b>3,778</b>	<b>6,400</b>	<b>7,835</b>	<b>9,922</b>
Minority interest	—	—	—	—	—	287	442
Deferred tax liability	15	35	32	32	87	170	217
<b>Debt</b>	<b>2,061</b>	<b>6,490</b>	<b>6,810</b>	<b>5,930</b>	<b>6,290</b>	<b>6,539</b>	<b>5,343</b>
Secured	2,061	6,490	5,110	4,229	6,290	6,539	5,343
Unsecured	—	—	1,701	1,701	—	—	—
Current liability and provisions	2,585	4,817	5,898	5,939	7,266	9,469	11,925
<b>Total capital</b>	<b>6,484</b>	<b>13,168</b>	<b>15,518</b>	<b>15,679</b>	<b>20,043</b>	<b>24,300</b>	<b>27,849</b>
<b>Assets</b>							
Cash and cash equivalents	615	1,796	1,199	1,000	1,000	1,000	1,000
Inventory	1,857	4,598	5,206	5,480	6,855	9,227	11,385
Sundry debtors	1,550	3,116	4,229	4,059	5,209	6,921	8,910
Loans and advances	561	763	1,218	1,218	1,218	1,218	1,218
Gross block	2,819	4,119	5,181	5,513	6,210	9,107	9,244
Less: Accumulated depreciation	1,189	1,429	1,764	2,209	2,678	3,275	4,009
Net fixed assets	1,630	2,690	3,417	3,304	3,533	5,832	5,235
Capital -WIP	225	102	146	516	2,126	—	—
<b>Net fixed assets (incl. C-WIP)</b>	<b>1,854</b>	<b>2,793</b>	<b>3,564</b>	<b>3,820</b>	<b>5,659</b>	<b>5,832</b>	<b>5,235</b>
Investments	46	102	102	102	102	102	102
Miscellaneous expenditure	—	—	—	—	—	—	—
<b>Total assets</b>	<b>6,484</b>	<b>13,168</b>	<b>15,518</b>	<b>15,679</b>	<b>20,043</b>	<b>24,300</b>	<b>27,849</b>
<b>Leverage and return ratios (x)</b>							
Debt/Equity	1.1	3.5	2.4	1.6	1.0	0.9	0.6
Debt/Capitalisation	0.5	0.8	0.7	0.6	0.5	0.5	0.4
Net debt/Equity	0.8	2.5	2.0	1.3	0.8	0.7	0.5
Net debt/Capitalisation	0.4	0.7	0.7	0.6	0.4	0.4	0.3
Net debt/EBITDA	1.6	3.8	3.6	3.2	2.3	1.8	1.1
ROAE (%)	20.8	18.3	22.6	20.8	20.5	23.9	27.1
ROACE (%)	17.9	13.2	11.4	10.3	12.6	15.0	18.0

Source: Company data, Kotak Institutional Equities estimates.

## Company profile: Leader in HSAW

### Largest and widespread HSAW capacities

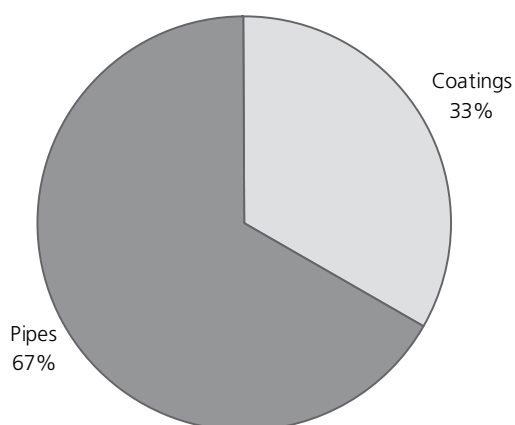
PSL is the leader in the domestic HSAW pipe market with a 1.1mtpa capacity, which is about 60% of the total domestic capacity. The company has recently set up a 75,000 tpa capacity in UAE and will be adding another 300,000 tpa capacity in USA in next 12 months. Its domestic capacity is spread across 11 mills with the largest one being 0.3 mtpa. Widespread capacities and proximity to ports enable PSL to efficiently service domestic and export orders. We note that PSL is capable of moving its smaller 75,000 tons capacity plants to areas close to the project execution site.

### Coating contributes significantly to the revenues

Coating activity contributed Rs5 bn (about 33%) to PSL's total revenues in FY2007. PSL is the largest linepipe coating company in the country and does coating for other players as well. We expect coating revenues to grow marginally and linepipe revenues to be the main driver of revenues and earnings. The company also manufactures linepipe plants and we believe this keeps its investment cost in new capacities low.

**Exhibit 68: Coating contributed about 33% to revenues in 2007**

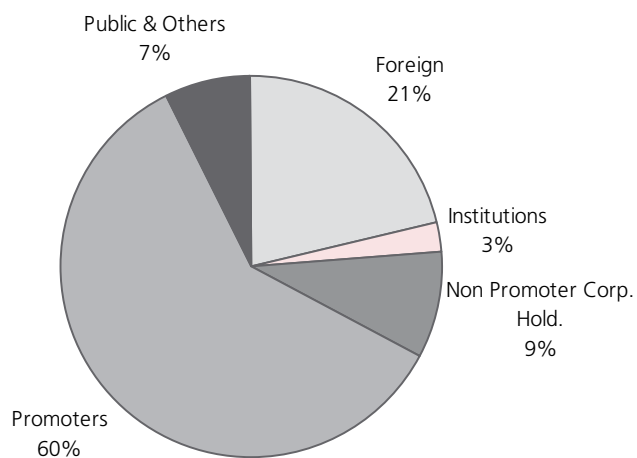
Revenue break-up by business (%)



Source: Company data.

## Shareholding pattern

Exhibit 69: Shareholding pattern as of 30 June 2007



Source: BSE.

### Company data and valuation summary

Company data	Stock data	High	Low	Price performance	1M	3M	12M
Rating: Outperform	52-week range (Rs)	402	182	Absolute (%)	12.6	53.8	54.1
	Yield (%)		1.7	Rel. to BSE-30 (%)	10.7	46.1	15.2
<b>Current price (Rs)</b>	Priced at close of:	August 1, 2007					
333	<b>Capitalization</b>			<b>Forecasts/valuation</b>	<b>2007</b>	<b>2008E</b>	<b>2009E</b>
	Market cap (Rs bn)		13.8	EPS (Rs)	16.5	25.2	41.1
	Net debt/(cash) (Rs mn)		4,930	P/E (X)	20.2	13.2	8.1
	Free float (%)		31.2	RoAE (%)	20.8	20.5	23.9
	Shares outstanding (mn)		41.4	EV/EBITDA (X)	12.0	8.4	5.9

Source: Company data, Kotak Institutional Equities estimates.



August 2, 2007

INITIATING COVERAGE

Coverage view: **Attractive**

Price: **Rs234**

Target price: **Rs210**

BSE-30: **14,936**

**Exciting but expensive.** Welspun is the most impressive of our universe of linepipe companies with its large order book and unmatched EBITDA margins. However, we find it hard to justify the valuations despite our strong projected capacity utilization and increasing EBITDA margins supported by the backward integration into plates. We expect revenues and net earnings to grow at a CAGR of 28.4% and 44.1%, respectively, over FY2007-10E. We initiate coverage with an Underperform rating and target price of Rs210.

### Valuations hard to justify; initiate with Underperform

We find Welspun's valuations hard to justify despite building in high capacity utilization and EBITDA margin, 62% and 18.8%, respectively, in FY2009E. Welspun stock is currently trading at 13.2X FY2009E fully diluted earnings and 7.2X FY2009E EBITDA. We find valuations stretched versus other linepipe players considering its lower return ratios and higher debt leverage at the approaching high points of the cycle. Our DCF-based target price is Rs210; optimistic scenario gives a value of Rs265 (13% upside).

### Two-pronged expansion: Going global; integrating backwards

We believe Welspun's expansion into USA (setting up HSAW plant) and backward integration (setting up a plate mill) will not only support its volume growth but also provide it ready access to raw materials (plates & coils). Factoring in its ability to acquire large orders, accreditations and backward integration, we model large volume increases and significant EBITDA margin improvements from existing high levels.

### Volumes and margins to grow strongly

We model linepipe volumes to increase at a CAGR of 21% over FY2007-10E. Further, we model margins to expand from 16.5% in 1QFY08 to 18.8% in FY2009E, mainly led by (1) volumes from USA facility and (2) backward integration into plates. We expect revenues and net earnings to grow at a CAGR of 28.4% and 44.1%, respectively, over FY2007-10E.

### Key risks—backward integration increasing risk exposure

Welspun's large ongoing capex and high gearing at the impending highs of the cycle make it highly vulnerable to improvements in demand-supply balance and resultant price declines. Capex in its plate mill may destroy value if Welspun fails to execute the plate mill efficiently as another 2.7 mtpa of plate capacity becomes operational in CY2009.

### Forecasts and valuation (consolidated)

March year-end	Sales (Rs mn)	EBITDA (Rs mn)	Adj. PAT (Rs mn)	EPS (Rs)	RoAE (%)	P/E (X)	EV/EBITDA (X)
2006	18,298	1,980	837	7.1	19.1	40.2	17.2
2007	26,785	3,332	1,410	10.6	22.0	27.3	14.0
2008E	36,796	5,991	2,776	17.4	24.4	15.7	10.3
2009E	44,538	8,363	3,321	18.2	18.8	13.2	7.2
2010E	56,674	10,071	4,267	22.9	19.2	10.3	5.4

Source: Company data, Kotak Institutional Equities estimates.

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Kotak Institutional Equities  
Research

Important disclosures appear  
at the back of this report.

## Valuation: DCF-based target price of Rs210

Our 12-month DCF-based target price for Welspun is Rs210. We use 12.5% WACC and 1.5% terminal growth rate. Despite projecting aggressive capacity utilization and EBITDA margins, we find hard to justify the valuations; currently trading at 13.2X and 7.2X FY2009E fully diluted earnings and EBITDA, respectively. We believe the market is ignoring the risks to earnings for Welspun from the likely domestic plate capacity additions and its large Rs18 bn debt at end-FY2009; optimistic scenario values the stock at Rs265 (13% upside).

### DCF-based target of Rs210

Exhibit 70: Our DCF-based target for Welspun is Rs210/share

DCF-based valuation for Welspun (Rs mn)

	2008E	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	Terminal Value
EBITDA	5,991	8,363	10,071	10,586	11,009	10,922	11,176	11,430	11,430	11,430	
Tax expense	(1,038)	(1,296)	(1,904)	(2,458)	(3,039)	(3,273)	(3,550)	(3,644)	(3,818)	(4,098)	
Changes in working capital	(3,413)	(1,829)	(354)	837	170	23	(110)	(105)	22	21	
<b>Cash flow from operations</b>	<b>1,539</b>	<b>5,238</b>	<b>7,813</b>	<b>8,965</b>	<b>8,140</b>	<b>7,672</b>	<b>7,516</b>	<b>7,681</b>	<b>7,634</b>	<b>7,354</b>	
Capital expenditure	(12,743)	(1,458)	(318)	(321)	(487)	(659)	(672)	(857)	(878)	(1,080)	
<b>Free cash flow to the firm</b>	<b>(11,204)</b>	<b>3,780</b>	<b>7,495</b>	<b>8,643</b>	<b>7,653</b>	<b>7,013</b>	<b>6,844</b>	<b>6,824</b>	<b>6,755</b>	<b>6,273</b>	<b>57,886</b>
Discounted cash flow-now	(10,362)	3,108	5,477	5,614	4,419	3,600	3,122	2,767	2,435	2,010	
Discounted cash flow-1 year forward		3,496	6,161	6,316	4,971	4,050	3,512	3,113	2,739	2,261	
Discounted cash flow-2 year forward			6,932	7,106	5,592	4,556	3,952	3,502	3,082	2,544	

Discount rate 12.5%

Growth from 2017 to perpetuity 1.5%

<b>Discount factor at WACC</b>	<b>0.92</b>	<b>0.82</b>	<b>0.73</b>	<b>0.65</b>	<b>0.58</b>	<b>0.51</b>	<b>0.46</b>	<b>0.41</b>	<b>0.36</b>	<b>0.32</b>	
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	+ 1-year	+ 2-years	
<b>Total PV of free cash flow (a)</b>	<b>36,621</b>	<b>64%</b>	<b>37,265</b>
<b>PV of terminal value (b)</b>	<b>20,866</b>	<b>36%</b>	<b>23,474</b>
<b>EV (a) + (b)</b>	<b>57,487</b>		<b>60,739</b>
<b>EV (US\$ mn)</b>	<b>1,419</b>		<b>1,500</b>
Net debt	18,300		15,941
<b>Equity value</b>	<b>39,187</b>		<b>44,798</b>
No. of shares	187.7		187.7
<b>Implied share price (Rs)</b>	<b>209</b>		<b>239</b>
Exit EV/EBITDA multiple (X)	5.0		

#### Sensitivity of DCF value to WACC and growth rate (Rs)

	WACC				
	11.5%	12.0%	12.5%	13.0%	13.5%
<b>0.0%</b>	218	205	194	183	173
<b>0.5%</b>	224	211	198	187	177
<b>1.0%</b>	230	216	203	192	181
<b>1.5%</b>	237	222	209	196	185
<b>2.0%</b>	245	229	215	202	190
<b>2.5%</b>	253	236	221	207	195
<b>3.0%</b>	262	244	228	214	200

Source: Kotak Institutional Equities estimates.

## Optimistic scenario does not leave much of an upside

Exhibit 71 illustrates scenarios wherein we build an optimistic and a pessimistic view versus our assumed case. More conservative combinations of realisations (5% lower than assumed) and raw material prices (5% lower than assumed) lead to lower valuations. The optimistic scenario assumes 5% higher realisations and similar raw material prices as in our assumed case.



**Exhibit 71: Share price is highly sensitive to price movements**

Sensitivity of DCF value to various pricing levels

Scenario	DCF value (Rs/share)	Scenario assumptions
Pessimistic	157	Realisations and material cost lower by 5%
Assumed	209	Our assumed case
Optimistic	265	Realisation up by 5%, material cost as in assumed case

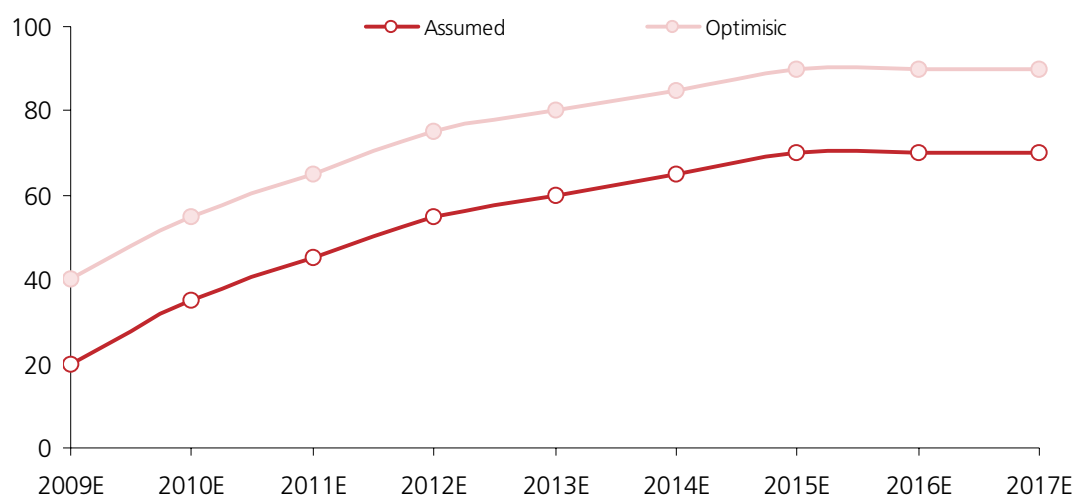
Source: Kotak Institutional Equities estimates.

**Higher-than-expected plate mill utilization could make us more positive**

Raising our capacity utilization forecast for plate mill for Welspun by an additional 20% throughout our forecast period increases our DCF-valuation to Rs252. We note that this would be a very bullish scenario considering nearly 5.2 mtpa of steel plate mill capacity is expected to come online by end-CY2008 (see Exhibit 33). JSPL has started a 1 mtpa steel plate mill capacity recently.

**Exhibit 72: Additional 20% plate mill capacity utilization would be a very bullish scenario**

Assumed and optimistic scenario for plate mill capacity utilization, March fiscal year-ends, 2009-2017E (%)



Source: Kotak Institutional Equities estimates.

We model increasing EBITDA margins and higher external sales for plate mills with additional 20% plate capacity utilization. However, we do not model any further increase in the LSAW pipe production with increasing plate production.

**Exhibit 73: Additional 20% plate mill capacity utilization to increase our DCF valuation to Rs252**

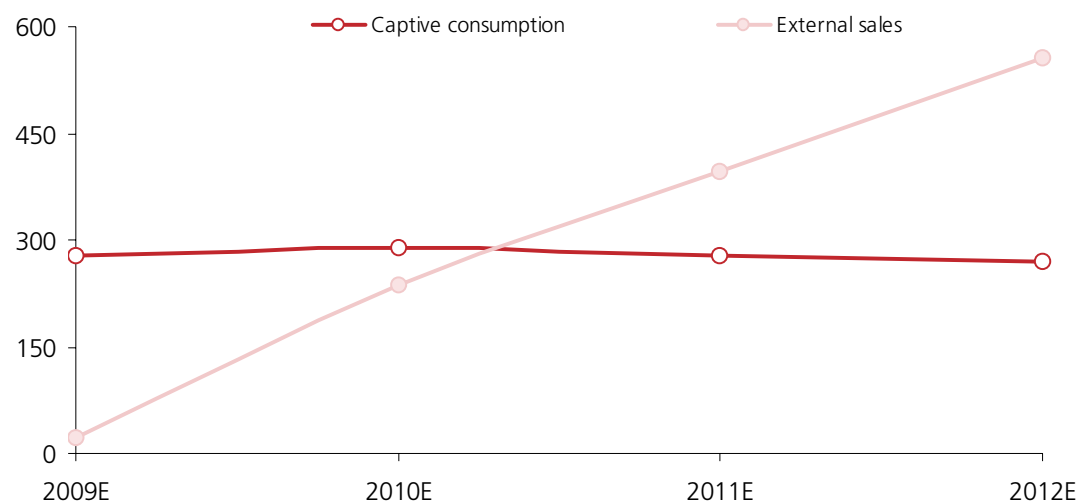
Scenario	DCF value (Rs/share)	Scenario assumptions
Assumed	209	Assumed utilisation level
Optimistic	252	Additional 20% capacity utilisation

Source: Kotak Institutional Equities estimates.

We expect external sales of plate mill to be to other LSAW players and shipbuilders, who are also witnessing strong order inflows. However, we expect increasing domestic competition in steel plate mills segment as 4.2 mtpa of steel plate mill capacity will get added over next 12-18 months in addition to the recent 1 mtpa of plate mill capacity of JSPL. We expect annual total external demand (excluding Welspun) for API grade steel plate to be around 0.85 mtpa in FY2009E and FY2010E, versus total capacity of 5.2 mtpa at end-CY2008. We estimate a total demand of ~0.5 mn tons over CY2007-11 from the two leading Indian shipyards.

**Exhibit 74: External sales of steel plates to increase gradually**

Captive consumption and external sales of steel plates, March fiscal year-ends, 2009-2012E ('000 ton)



Source: Kotak Institutional Equities estimates.

## Two-pronged expansion: Going global; backward integration

We believe Welspun's expansion into the USA (setting up HSAW plant) and backward integration (setting up plates) will support its volume growth as well as provide it ready access to raw materials (plates & coils). Factoring in its ability to acquire large orders, accreditations and backward integration, we model large volume increases and significant EBITDA margin improvements from the prevailing high levels.

### Going global—setting up HSAW facility in the US

Welspun is currently setting up a 300,000 tpa HSAW capacity in USA to cater to the increasing demand for linepipes in the North American region. We expect this to get operational in 2QFY09. We model higher EBITDA margins for the US plant (17.3% in FY2010) versus Indian capacities (excluding plate benefits). Increasing capacity utilization will further drive margins. We model volumes and revenues from the US to increase by 71% and 69% over FY2009-10. We expect revenues from the US facility to account for 9.3% of total revenues in FY2009E (see Exhibit 75).

Exhibit 75: Revenues from US facility to account for 9.3% of total revenue in FY2009E

US revenues, total revenues and US revenue as proportion to total revenue March fiscal year-ends, 2009-2010E

	2009E	2010E
US revenues (Rs mn)	4,146	7,179
Total revenues (Rs mn)	44,538	56,674
<b>US revenues as proportion of total revenues</b>	<b>9.3</b>	<b>12.7</b>

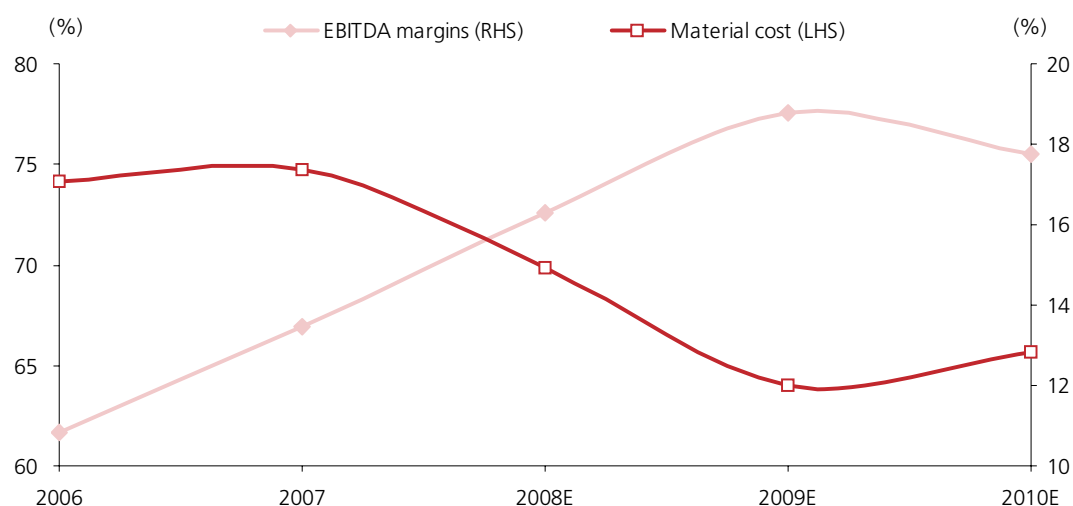
Source: Kotak Institutional Equities estimates.

### Unmatched EBITDA margins slated to get better with plate mill

We believe Welspun's unmatched EBITDA margins (16.5% in 1QFY08) are set to improve with its plate mill becoming operational in 4QFY08. Welspun is putting up a 1.5 mn ton plate and coil mill with an investment of Rs18 bn. With the plate mill coming up, we believe Welspun will substitute its purchase of plates with slabs and produce plates for captive consumption in LSAW pipe production. We model plate mill volumes to kick in from 1QFY09, further improving EBITDA margins to 18.8% in FY2009E (see Exhibit 76). We model Welspun's plate costs to reduce by US\$150-200/ton in FY2009 and FY2010 after the commencement of its captive plate mill.

**Exhibit 76: EBITDA margins set to get better with captive plate mill**

EBITDA margins and raw material as a proportion to revenues, March fiscal year-ends, 2006-2010E



Note:

FY2007 EBITDA is adjusted for trading sales; reported margin was 12.4%

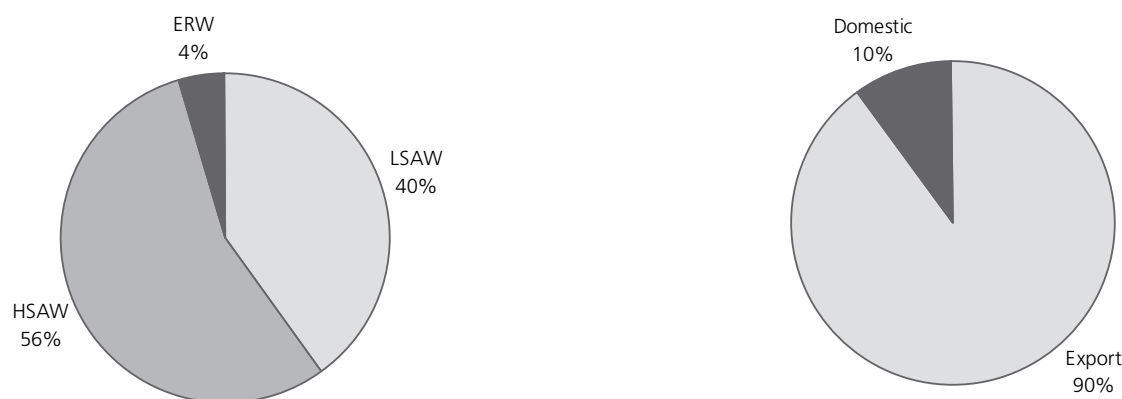
Source: Company, Kotak Institutional Equities estimates.

**Large order book provides strong near-term visibility**

Strong order book of Rs4.5 bn (1.5X last 12 month revenue) provides a strong near-term visibility for Welspun's growth. We note that the order book is dominated by export orders, which account for 90% of the order book (see Exhibit 77). We expect order book to increase with the strong demand for linepipes from North America, India and other geographies.

**Exhibit 77: Rs4.5 bn order book skewed towards exports and HSAW**

Welspun order book as on 1QFY08-end



Source: Company data

## Key risk: Increasing risk exposure with backward integration

Welspun's large ongoing capex and high gearing at approaching high points of the cycle make it highly vulnerable to improving demand-supply balance and resultant price declines. Welspun's plate mill capex could destroy value if it fails to execute the plate mill efficiently as another 2.7 mtpa of plate capacity will get operational in CY2009.

### Plate mill could pull back

We believe the commissioning of the plate-cum-coil mill at Anjar by CY2007 is a big challenge for the company—its large investment size could effect returns significantly. The company is betting on the high price differential between slabs and plates, which we believe may not sustain over the long term. Hence the viability of the investment may be questionable. Lower-than-expected capacity utilization at the plate mill could adversely impact margins and earnings of the company. Moreover, increasing domestic competition in the steel plate mill could also affect margins for external plate sales.

### Lower-than-expected volumes

We expect Welspun's volumes to grow at a CAGR of 21% over FY2007-10E. We expect Welspun to continue to increase its exports and acquire larger share of domestic orders. We model increasing volumes with US plant getting operational in 2QFY09. Any delay in the commencement of the new plant could adversely impact revenue and earning growth.

## Financials—strong volumes; large capex, high debt and dilution

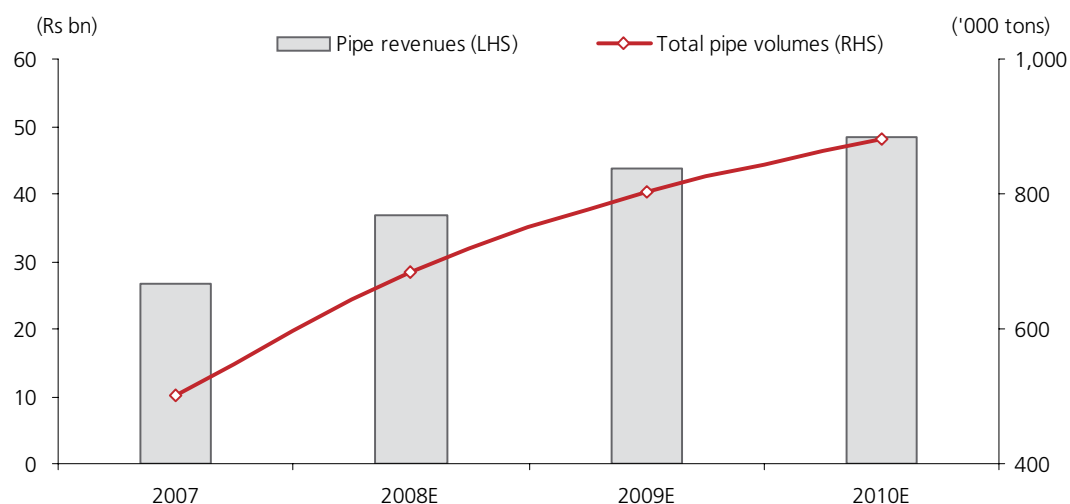
We expect strong volumes to drive revenues at a CAGR of 28.4% over FY2007-10E; we model volumes to grow at a CAGR of 21% over the same period. We build increasing utilization levels and improving EBITDA margins with the plate mill commencing production in 4QFY08. We expect EBITDA margin to improve to 18.8% in FY2009E from 13.5% (adjusted) in FY2007, mainly on account of raw material saving. Debt-equity at 0.9X at end-FY2009 could have been much higher but for large FCCB and warrants dilution.

### Strong volumes to drive revenues

We expect volumes for Welspun to grow at a CAGR of 21% over FY2007-10E. We believe strong local and global demand for linepipes will drive capacity utilization for Welspun; expect utilization to increase to 68% in FY2010E from 50% in FY2007. We expect revenues to be driven by higher volumes and higher realisations during FY2007-10E. We expect revenues to increase at a CAGR of 28.4% over FY2007-10E.

**Exhibit 78: Revenues to grow with increase in volumes**

Pipe revenues (Rs bn), pipe volumes ('000 tons), March fiscal year-ends, 2007-2010E



Source: Company data, Kotak Institutional Equities estimates.

## Assumptions

Exhibit 79 illustrates our profit and loss model assumptions.

Exhibit 79: Profit and loss model assumptions for Welspun, March fiscal year-ends, 2007-2010E

	2007	2008E	2009E	2010E
<b>Sales (tons)</b>				
HSAW	217,739	320,000	320,000	320,000
ERW	110,000	137,500	150,000	162,500
LSAW	175,000	227,500	253,750	262,500
HSAW- USA	—	—	78,750	135,000
Plate (external sales)	—	—	20,875	236,250
<b>Realisation (US\$/ton)</b>				
HSAW	1,074	1,235	1,260	1,273
ERW	850	918	927	936
LSAW	1,235	1,482	1,512	1,527
HSAW- USA	—	—	1,300	1,313
Plate	—	—	849	873
<b>Raw material cost (US\$/ton)</b>				
HR coil	658	714	749	757
Plates	834	909	909	918
Slabs	—	—	610	616

Source: Company, Kotak Institutional Equities estimates.

Exhibit 80: Profit and loss model for Welspun (consolidated), March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E
<b>Operating Revenues</b>	<b>8,277</b>	<b>10,385</b>	<b>18,298</b>	<b>26,785</b>	<b>36,796</b>	<b>44,538</b>	<b>56,674</b>
<b>Operating expenses</b>							
Change in stock	(16)	171	268	(41)	—	—	—
Raw materials consumed	(5,925)	(8,245)	(13,842)	(20,183)	(25,703)	(28,509)	(37,218)
Manufacturing Costs	(179)	(179)	(499)	(548)	(797)	(1,477)	(1,942)
Material handling & ship chartering	(326)	(782)	(1,289)	(1,295)	(2,435)	(2,995)	(3,361)
Employee costs	(129)	(170)	(408)	(595)	(767)	(1,075)	(1,252)
Other expenses	(330)	(497)	(548)	(791)	(1,104)	(2,118)	(2,829)
<b>Total expenditure</b>	<b>(6,904)</b>	<b>(9,701)</b>	<b>(16,318)</b>	<b>(23,453)</b>	<b>(30,805)</b>	<b>(36,175)</b>	<b>(46,603)</b>
<b>EBITDA</b>	<b>1,372</b>	<b>684</b>	<b>1,980</b>	<b>3,332</b>	<b>5,991</b>	<b>8,363</b>	<b>10,071</b>
EBITDA margin (%) (a)	16.6	6.6	10.8	12.4	16.3	18.8	17.8
Net finance cost	(230)	(203)	(419)	(708)	(1,240)	(2,146)	(1,786)
Other income/(expense)	67	27	19	19	—	—	—
<b>PBDT</b>	<b>1,209</b>	<b>507</b>	<b>1,580</b>	<b>2,643</b>	<b>4,751</b>	<b>6,217</b>	<b>8,285</b>
Depreciation and amortisation	(183)	(241)	(352)	(476)	(527)	(1,163)	(1,791)
<b>Pretax profits before extra-ordinaries</b>	<b>1,026</b>	<b>266</b>	<b>1,228</b>	<b>2,167</b>	<b>4,224</b>	<b>5,054</b>	<b>6,494</b>
Exceptional items	96	235	(325)	24	—	—	—
<b>Profit before tax</b>	<b>1,122</b>	<b>501</b>	<b>903</b>	<b>2,191</b>	<b>4,224</b>	<b>5,054</b>	<b>6,494</b>
Current tax	52	39	119	663	803	910	1,494
FBT	—	—	8	9	12	15	20
Deferred tax	350	124	162	93	633	808	714
Reported net profit	<b>720</b>	<b>338</b>	<b>614</b>	<b>1,426</b>	<b>2,776</b>	<b>3,321</b>	<b>4,267</b>
<b>Adjusted net profit</b>	<b>658</b>	<b>180</b>	<b>837</b>	<b>1,410</b>	<b>2,776</b>	<b>3,321</b>	<b>4,267</b>
Primary EPS (using wtd. Avg. shares)	2.3	1.6	7.1	10.6	17.4	18.2	22.9
Diluted EPS	2.3	1.5	5.8	8.6	14.9	17.7	22.7
Year end no. of shares (mn)	283	107	129	140	179	186	186
Weighted avg. no. of shares (mn)	282	107	115	133	160	183	186
Fully diluted no. of shares (mn)	282	114	140	165	187	188	188
<b>Margins (%)</b>							
EBITDA margin	16.6	6.6	10.8	12.4	16.3	18.8	17.8
PBT margin	12.4	2.6	6.7	8.1	11.5	11.3	11.5
Net profit margin (w/o EO)	8.0	1.7	4.6	5.3	7.5	7.5	7.5
Effective tax rate (%)	35.8	32.5	32.1	34.9	34.3	34.3	34.3
<b>Growth yoy (%)</b>							
Revenues	—	25.5	76.2	46.4	37.4	21.0	27.2
EBITDA	—	(50.2)	189.6	68.3	79.8	39.6	20.4
PBT	—	(74.0)	361.0	76.5	94.9	19.6	28.5
Net profit (w/o extraordinary)	—	(72.7)	365.6	68.5	96.9	19.6	28.5
Diluted EPS	—	(34.6)	280.7	47.1	73.6	19.1	28.5

Note:

(a) EBITDA margin adjusted for trading revenues for FY2007 was 13.5%

Source: Company data, Kotak Institutional Equities estimates.



## Cash flows—FCF positive in FY2009E

We model Welspun to spend Rs14.2 bn in FY2007-2009E and expect the company to generate Rs10 bn in operating cash flows (before working capital) over the same period. The capex includes Rs4 bn of capex for 300,000 tpa capacity in the US.

Exhibit 81: Large capex for plate mill and US facility to be funded through equity dilution and debt Capex and funding for new facilities

Facility	Capacity mtpa	Capex US\$ mn	Debt funding US\$ mn	Start date	Remarks
Plate mill	1.5	402	287	4QFY08	Excluding FCCB
HSAW-USA	0.3	100	70	2QFY09	

Source: Company data.

Exhibit 82: Cash flow model for Welspun (consolidated), March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E
<b>Operating</b>							
Pre-tax and pre extraordinary income	1,026	266	1,228	2,167	4,224	5,054	6,494
Depreciation & amortization	183	241	352	476	527	1,163	1,791
Taxes paid	(50)	(57)	(102)	(672)	(815)	(925)	(1,514)
Dividend and other income	(93)	(114)	(114)	(19)	—	—	—
Interest expense	183	110	158	708	1,534	1,831	1,425
Interest paid	(337)	(102)	(152)	(708)	(825)	(1,831)	(1,425)
Foreign exchange loss/(gain)	92	81	(314)	24	—	—	—
Extraordinary	6	2	(8)	—	—	—	—
Other non-cash items	25	1	8	—	—	—	—
Working capital changes	296	702	(1,076)	(1,934)	(3,413)	(1,829)	(354)
<b>Cash flow from operations</b>	<b>1,331</b>	<b>1,132</b>	<b>(21)</b>	<b>41</b>	<b>1,233</b>	<b>3,463</b>	<b>6,417</b>
<b>Operating, excl. working capital</b>	<b>1,035</b>	<b>430</b>	<b>1,056</b>	<b>1,975</b>	<b>4,646</b>	<b>5,292</b>	<b>6,771</b>
<b>Investing</b>							
Capital investment	(108)	(1,781)	(5,323)	(6,811)	(12,743)	(1,458)	(318)
Purchase/ sale of assets/ business	—	—	—	—	—	—	—
Investment changes	8	(55)	53	(256)	1	—	—
Advances to subsidiary	(175)	172	3	—	—	—	—
Interest/dividend received	65	115	107	19	—	—	—
<b>Cash flow from investing</b>	<b>(210)</b>	<b>(1,549)</b>	<b>(5,160)</b>	<b>(7,048)</b>	<b>(12,743)</b>	<b>(1,458)</b>	<b>(318)</b>
<b>Financing</b>							
Equity issues	14	221	509	256	1,427	687	—
Net proceeds from borrowings	(960)	2,002	5,284	7,119	8,814	(2,558)	(6,001)
Effect of forex changes	—	—	—	—	—	—	—
Dividends paid (incl. tax)	—	—	(7)	—	(165)	(333)	(399)
<b>Cash flow from financing</b>	<b>(946)</b>	<b>2,223</b>	<b>5,786</b>	<b>7,375</b>	<b>10,076</b>	<b>(2,205)</b>	<b>(6,399)</b>
Net chg in CCE	175	1,806	605	368	(1,434)	(200)	(300)
Beginning cash	397	655	2,461	3,066	3,434	2,000	1,800
<b>Ending cash</b>	<b>572</b>	<b>2,461</b>	<b>3,066</b>	<b>3,434</b>	<b>2,000</b>	<b>1,800</b>	<b>1,500</b>
Discretionary cash flow	175	1,806	599	368	(1,600)	(533)	(699)
<b>Free cash flow</b>	<b>1,223</b>	<b>(649)</b>	<b>(5,350)</b>	<b>(6,770)</b>	<b>(11,676)</b>	<b>1,672</b>	<b>5,701</b>

Source: Company data, Kotak Institutional Equities estimates.

### Balance sheet—RoAE reducing; debt-equity comparatively high

We expect RoAE of Welspun to drop to 18.8% in FY2009E from 22% in FY2007 despite significant profit margin improvement. We expect debt-equity to remain high at 0.9X in FY2009 compared to 1.6X in FY2007; we note this could have been much higher but for the large equity dilution.

Exhibit 83: Equity dilution post FCCB and warrants conversion

Convertible instrument	Amount outstanding (\$ mn)	Conversion (Rs/share)	No. of shares (mn)
Shares outstanding - Mar 2007			139.8
FCCB - \$40 mn	3.25	71.4	2.0
Warrants	15.92	80.1	8.5
FCCB - \$75 mn	75.00	162.6	21.1
New warrants	35.00	102.2	14.7
ESOPS			1.7
<b>Total diluted no. of shares</b>			<b>187.7</b>

Source: Company data.

Exhibit 84: Balance sheet model for Welspun (consolidated), March fiscal year-ends, 2004-2010E (Rs mn)

	2004	2005	2006	2007	2008E	2009E	2010E
<b>Equity</b>							
Share capital	1,414	535	644	699	897	930	930
Reserves and surplus	744	2,172	4,083	5,768	13,082	16,723	20,591
Warrants	—	—	68	68	—	—	—
<b>Net worth</b>	<b>2,157</b>	<b>2,707</b>	<b>4,795</b>	<b>6,535</b>	<b>13,978</b>	<b>17,653</b>	<b>21,521</b>
Preference capital	—	221	221	—	—	—	—
Deferred tax liability	376	539	701	794	1,427	2,235	2,949
<b>Debt</b>	<b>1,652</b>	<b>3,847</b>	<b>8,027</b>	<b>15,146</b>	<b>20,555</b>	<b>17,997</b>	<b>11,997</b>
Secured	1,596	2,040	3,933	11,635	20,449	17,891	11,890
Unsecured	57	1,806	4,094	3,511	106	106	106
Current liability and provisions	1,674	7,785	9,393	10,558	13,299	15,075	18,821
<b>Total capital</b>	<b>5,860</b>	<b>15,098</b>	<b>23,137</b>	<b>33,034</b>	<b>49,260</b>	<b>52,961</b>	<b>55,288</b>
<b>Assets</b>							
Cash and cash equivalents	608	2,461	3,067	3,434	2,000	1,800	1,500
Inventory	910	3,757	5,429	5,135	8,569	10,372	12,422
Sundry debtors	1,116	2,623	3,070	5,849	8,569	10,372	12,422
Loans and advances	369	853	1,459	1,911	1,911	1,911	1,911
<b>Current assets</b>	<b>3,002</b>	<b>9,694</b>	<b>13,024</b>	<b>16,330</b>	<b>21,049</b>	<b>24,455</b>	<b>28,254</b>
Gross block	3,348	5,033	7,893	9,112	9,706	31,818	32,136
Less: Accumulated depreciation	(687)	(1,058)	(1,402)	(1,878)	(2,405)	(3,568)	(5,358)
Net fixed assets	2,661	3,975	6,490	7,234	7,301	28,250	26,778
Capital -WIP	113	1,376	3,623	9,214	20,654	—	—
<b>Net fixed assets (incl. C-WIP)</b>	<b>2,774</b>	<b>5,351</b>	<b>10,113</b>	<b>16,448</b>	<b>27,955</b>	<b>28,250</b>	<b>26,778</b>
Investments	84	53	—	256	256	256	256
<b>Total Assets</b>	<b>5,860</b>	<b>15,098</b>	<b>23,137</b>	<b>33,034</b>	<b>49,260</b>	<b>52,961</b>	<b>55,288</b>
<b>Leverage and return ratios (x)</b>							
Debt/Equity	0.7	0.6	0.7	1.6	1.3	0.9	0.5
Debt/Capitalisation	0.4	0.4	0.4	0.6	0.6	0.5	0.3
Net debt/Equity	0.4	(0.1)	0.2	1.1	1.2	0.8	0.4
Net debt/Capitalisation	0.3	(0.1)	0.2	0.5	0.5	0.4	0.3
Net debt/EBITDA	0.8	(0.3)	0.6	2.4	3.1	1.9	1.0
ROAE (%)	26.0	6.2	19.1	22.0	24.4	18.8	19.2
ROACE (%)	19.0	4.4	11.6	10.3	12.3	12.8	14.6

Source: Company data, Kotak Institutional Equities estimates

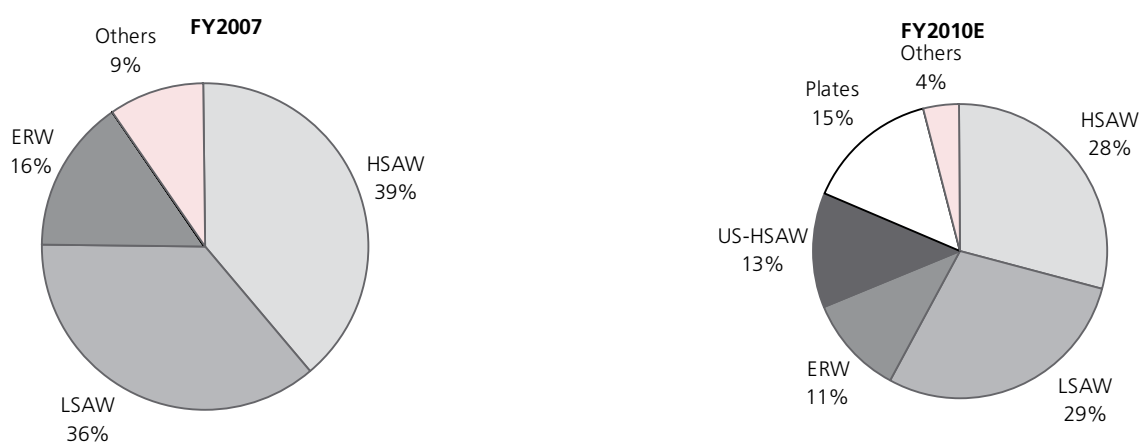
## Company profile: Building integration

Welspun Gujarat Stahl Rohren (Welspun) is part of the US\$1 bn Welspun group which has interests in textiles, sponge iron and steel pipes. Welspun's pipe portfolio spans across HSAW, LSAW and ERW, with a total pipe manufacturing capacity of 1 mtpa. Currently, it is setting up a 300,000 tpa HSAW plant in USA and 1.5 mtpa steel plate mill at Anjar, Gujarat.

### Balanced product mix between welded pipes

Welspun's pipe portfolio spans across HSAW, LSAW and ERW with LSAW accounting for the largest share of revenues (see Exhibit 85). We believe HSAW will account for a larger share of revenues in FY2010E with the upcoming HSAW capacity in US (see Exhibit 85).

**Exhibit 85: HSAW to account for larger share of revenue in FY2010E**  
Revenue break-up, March fiscal year-ends, 2007 and 2010E (%)



Source: Company, Kotak Institutional Equities estimates.

## Building a large slab-to-pipe mill

Welspun has significant concentrated capacities in all the three types of pipes with ability to produce up to X-80 grade of pipes. We note that with the upcoming plate mill capacity in Anjar, Welspun will be the only Indian linepipe manufacturer with backward integration into plates.

**Exhibit 86: Current pipe capacities of Welspun**

Parameters	LSAW	HSAW	ERW
Capacity ('000 ton)	350	400	250
Outer diameter	16"-60"	18"-100"	0.5"-16"
Thickness	6mm-65mm	upto 15mm	upto 13mm
Grades Possible	API5L, 2B, IS -upto X-80	APIBL B upto X-80	APIBL upto X-70

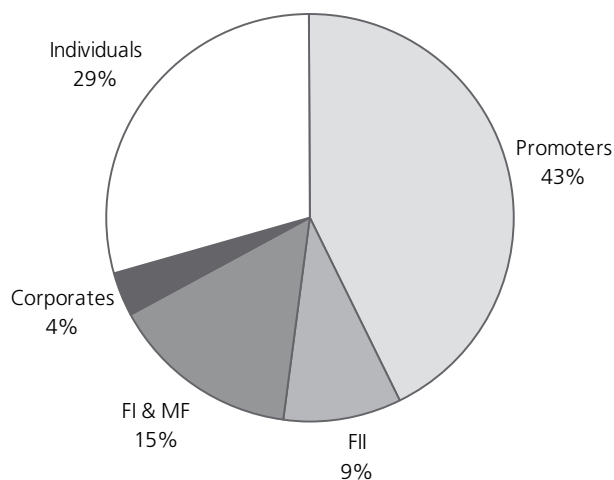
Note:

Pipe manufacturing supplemented by coating capacity of 6.24 mn sqm p.a.

Source: Company data.

## Shareholding pattern

Exhibit 87: Welspun shareholding pattern as of 30 June 2007



Source: BSE.

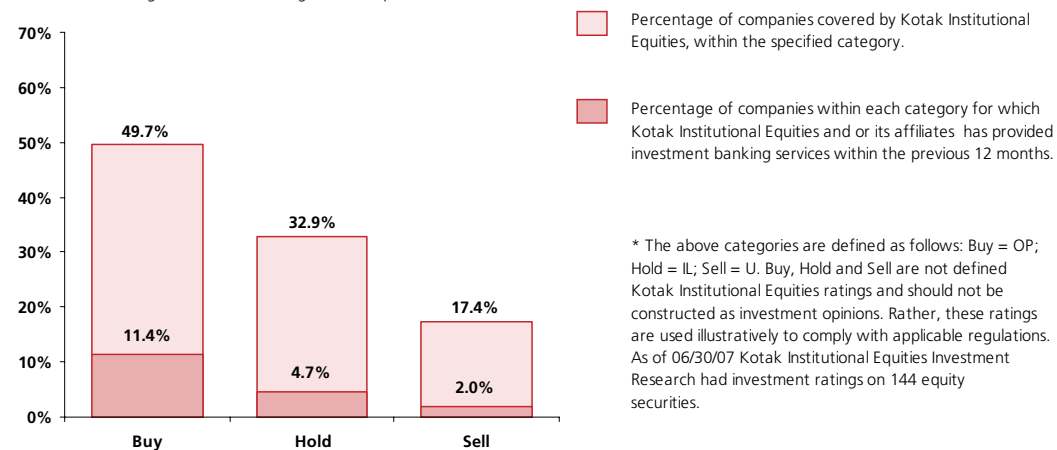
## Company data and valuation summary

Company data	Stock data	High	Low	Price performance	1M	3M	12M
Rating: Underperform	52-week range (Rs)	264	62	Absolute (%)	5.3	71.2	262.3
	Yield (%)		0.7	Rel. to BSE-30 (%)	3.4	63.5	223.4
Current price (Rs)	Priced at close of:	August 1, 2007					
234	Capitalization						
	Market cap (Rs bn)		43.9	Forecasts/valuation	2007	2008E	2009E
	Net debt/(cash) (Rs mn)		11,742	EPS (Rs)	8.6	14.9	17.7
	Free float (%)		29.3	P/E (X)	27.3	15.7	13.2
	Shares outstanding (mn)		187.7	RoAE (%)	22.0	24.4	18.8
				EV/EBITDA (X)	14.0	10.3	7.2

"I, Nitin Bhasin, hereby certify that all of the views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report."

**Kotak Institutional Equities Research coverage universe**

Distribution of ratings/investment banking relationships



Source: Kotak Institutional Equities.

As of June 30, 2007

**Analyst coverage**

Companies that the analyst mentioned in this document follow

Covering Analyst: Nitin Bhasin	
Company name	Ticker
AIA Engineering	AIAE.BO
Educomp Solutions	EDSO.BO
Jindal Saw	JIND.BO
PSL	PSLH.BO
Vardhman Textiles	VART.BO
Welspun Gujarat Stahl Rohren	WGSR.BO

Source: Kotak Institutional Equities Research.

## Ratings and other definitions/identifiers

### Current rating system

#### Definitions of ratings

**OP = Outperform.** We expect this stock to outperform the BSE Sensex over the next 12 months.

**IL = In-Line.** We expect this stock to perform in line with the BSE Sensex over the next 12 months.

**U = Underperform.** We expect this stock to underperform the BSE Sensex over the next 12 months.

#### Other definitions

**Coverage view.** The coverage view represents each analyst's overall fundamental outlook on the Sector. The coverage view will consist of one of the following designations: Attractive (A), Neutral (N), Cautious (C).

#### Other ratings/identifiers

**NR = Not Rated.** The investment rating and target price, if any, have been suspended temporarily. Such suspension is in compliance with applicable regulation(s) and/or Kotak Securities policies in circumstances when Kotak Securities or its affiliates is acting in an advisory capacity in a merger or strategic transaction involving this company and in certain other circumstances.

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**NA = Not Available or Not Applicable.** The information is not available for display or is not applicable.

**NM = Not Meaningful.** The information is not meaningful and is therefore excluded.

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